

Power TMOS® MOSFETs (Continued)

TO-247 Isolated Mounting Hole

TO-247 — N-Channel

| Mfr.'s Type <sup>a</sup> | V <sub>DS(ON)</sub> (V)<br>Min. | R <sub>DS(ON)</sub> (Ω)<br>Max. | @<br>I <sub>D</sub> (A) | I <sub>D</sub> (Cont.) (A) | P <sub>D</sub> <sup>b</sup> (W)<br>Max. |
|--------------------------|---------------------------------|---------------------------------|-------------------------|----------------------------|-----------------------------------------|
| MTW10N100E               | 1000                            | 1.3000                          | 5.00                    | 10.0                       | 250.00                                  |
| MTW7N80E                 | 800                             | 1.0000                          | 3.50                    | 7.0                        | 180.00                                  |
| MTW8N60E                 | 600                             | 0.5000                          | 4.00                    | 8.0                        | 180.00                                  |
| MTW14N50E                | 500                             | 0.3200                          | 7.00                    | 14.0                       | 180.00                                  |
| MTW20N50E                | 500                             | 0.2400                          | 10.00                   | 20.0                       | 250.00                                  |
| MTW16N40E                | 400                             | 0.3000                          | 8.00                    | 16.0                       | 180.00                                  |
| MTW24N40E                | 400                             | 0.1600                          | 12.00                   | 24.0                       | 250.00                                  |
| MTW32N25E                | 250                             | 0.1000                          | 16.00                   | 32.0                       | 250.00                                  |
| MTW32N20E                | 200                             | 0.0750                          | 16.00                   | 32.0                       | 180.00                                  |

TMOS V

TMOS V — DPAK

|          |    |        |      |      |                   |
|----------|----|--------|------|------|-------------------|
| MTD3055V | 60 | 0.1500 | 6.00 | 12.0 | 1.75 <sup>c</sup> |
|----------|----|--------|------|------|-------------------|

<sup>a</sup>TC=25°C. <sup>b</sup>Indicates Logic Level. <sup>c</sup>Power rating when mounted on an FR-4 glass epoxy printed circuit board with the minimum recommended footprint.

TMOS V (Continued)

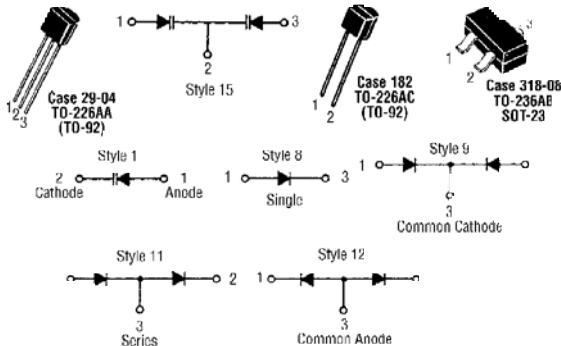
TMOS V —TO-220AB

| Mfr.'s Type <sup>a</sup> | V <sub>DS(ON)</sub> (V)<br>Min. | R <sub>DS(ON)</sub> (Ω)<br>Max. | @<br>I <sub>D</sub> (A) | I <sub>D</sub> (Cont.) (A) | P <sub>D</sub> <sup>b</sup> (W)<br>Max. |
|--------------------------|---------------------------------|---------------------------------|-------------------------|----------------------------|-----------------------------------------|
| MTP3055V                 | 60                              | 0.1500                          | 6.00                    | 12.0                       | 40.00                                   |
| MTP15N06V                | 60                              | 0.1200                          | 7.50                    | 15.0                       | 53.00                                   |
| MTP36N06V                | 60                              | 0.0400                          | 16.00                   | 32.0                       | 88.00                                   |
| MTP50N06V                | 60                              | 0.0280                          | 22.50                   | 42.0                       | 107.00                                  |

S0-8

|              |    |        |       |      |      |
|--------------|----|--------|-------|------|------|
| MMDF3N04HDR2 | 40 | 0.0800 | 3.40  | 3.4  | 2.00 |
| MMDF6N02HDR2 | 20 | 0.0350 | 6.00  | 6.5  | 2.00 |
| MMSF10N02ZR2 | 20 | 0.0150 | 10.00 | 10.0 | 2.50 |

Diodes



Tuning Diodes

Abrupt Tuning Diodes Capacitance Ratio @ 2.0 Volts/30 Volts, General Purpose;

Case 182 — TO-226AC (TO-92) — 2-Lead

These devices exhibit high Q characteristics.

| Mfr.'s Type | C <sub>T</sub> @ V <sub>R</sub> =4.0 V, 1.0 MHz |              |           | V <sub>R(BRR)</sub> (V) | Cap. Ratio C <sub>4</sub> /C <sub>30</sub> Min. | Q<br>4.0 V, 50 MHz Typ. |
|-------------|-------------------------------------------------|--------------|-----------|-------------------------|-------------------------------------------------|-------------------------|
|             | (pF) Min.                                       | (pF) Nominal | (pF) Max. |                         |                                                 |                         |
| MV2109      | 29.7                                            | 33.0         | 36.3      | 30                      | 2.5                                             | 200                     |

Abrupt Tuning Diodes for FM Radio — Dual; Case 29-04 — TO-226AA (TO-92)

| Mfr.'s Type | C <sub>T</sub> @ V <sub>R</sub> <sup>2</sup> |           |     | Cap Ratio C <sub>3</sub> /C <sub>30</sub> Min. | Q<br>3.0 V, 50 MHz Min. | V <sub>R(BRR)</sub> (V) | Device Marking | Style |
|-------------|----------------------------------------------|-----------|-----|------------------------------------------------|-------------------------|-------------------------|----------------|-------|
|             | (pF) Min.                                    | (pF) Max. | (V) |                                                |                         |                         |                |       |
| MV104       | 37                                           | 42        | 3.0 | 2.5                                            | 100                     | 32                      | —              | 15    |

<sup>2</sup>Each Diode.

Hyper-Abrupt Tuning Diodes For Telecommunications — Single; Case 182 — TO-226AC (TO-92)

| Mfr.'s Type | C <sub>T</sub> @ V <sub>R</sub> (f=1.0 MHz) |           |     | Cap. Ratio @ V <sub>R</sub> |      |      | Q          |             | V <sub>R(BRR)</sub> (V) | Device Marking | Case Style |
|-------------|---------------------------------------------|-----------|-----|-----------------------------|------|------|------------|-------------|-------------------------|----------------|------------|
|             | (pF) Min.                                   | (pF) Max. | (V) | Min.                        | Max. | (V)  | 3.0 V Min. | 50 MHz Max. |                         |                |            |
| MV209       | 26.0                                        | 32.0      | 3.0 | 5.0                         | 6.5  | 3/25 | 200        | —           | 30                      | —              | 1          |

Hyper-Abrupt Tuning Diodes For Telecommunications — Single; Case 318-07 — TO-236AB (SOT-23)

|             |      |      |      |     |     |      |     |   |    |     |   |
|-------------|------|------|------|-----|-----|------|-----|---|----|-----|---|
| MMBV105GLT1 | 1.8  | 2.8  | 25.0 | 4.0 | 6.0 | 3/25 | 200 | — | 30 | M4E | 8 |
| MMBV109LT1  | 26.0 | 32.0 | 3.0  | 5.0 | 6.5 | 3/25 | 200 | — | 30 | M4A | 8 |

Hyper-Abrupt Tuning Diodes for Communications — Dual; Case 318-07 — TO-236AB (SOT-23)

|            |      |      |     |     |     |     |     |   |    |    |   |
|------------|------|------|-----|-----|-----|-----|-----|---|----|----|---|
| MMBV609LT1 | 26.0 | 32.0 | 3.0 | 1.8 | 2.4 | 3/8 | 250 | — | 20 | 5L | 9 |
|------------|------|------|-----|-----|-----|-----|-----|---|----|----|---|

Hot-Carrier Diodes

Case 182 — TO-226AC (TO-92)

The following is a listing of hot carrier (Schottky) diodes that exhibit low forward voltage drop for improved circuit efficiency.

| Mfr.'s Type | V <sub>R(BRR)</sub> (V) | C <sub>T</sub> @V <sub>R</sub> (pF) Max. | V <sub>F</sub> @ 10 mA (V) Max. | I <sub>R</sub> @ V <sub>R</sub> (nA) Max. | Minority Lifetime (ps) Typ. | Device Marking | Style |
|-------------|-------------------------|------------------------------------------|---------------------------------|-------------------------------------------|-----------------------------|----------------|-------|
| MBD701      | 70.0                    | 1.0 @ 20 V                               | 1.0                             | 200 @ 35.0 V                              | 15                          | —              | 1     |
| MBD301      | 30.0                    | 1.5 @ 15 V                               | 0.6                             | 200 @ 25.0 V                              | 15                          | —              | 1     |

Hot-Carrier Diodes (Continued)

Case 318-08 — TO-236AB (SOT-23)

| Mfr.'s Type | V <sub>R(BRR)</sub> (V) | C <sub>T</sub> @V <sub>R</sub> (pF) Max. | V <sub>F</sub> @ 10 mA (V) Max. | I <sub>R</sub> @ V <sub>R</sub> (nA) Max. | Minority Lifetime (ps) Typ. | Device Marking | Style |
|-------------|-------------------------|------------------------------------------|---------------------------------|-------------------------------------------|-----------------------------|----------------|-------|
| MMBD701LT1  | 70.0                    | 1.0 @ 20 V                               | 1.0                             | 200 @ 35.0 V                              | 15                          | 5H             | 8     |
| MMBD301LT1  | 30.0                    | 1.5 @ 15 V                               | 0.6                             | 200 @ 25.0 V                              | 15                          | 4T             | 8     |
| MMBD101LT1  | 7.0                     | 1.0 @ 0 V                                | 0.6                             | 250 @ 3.0 V                               | —                           | 4M             | 8     |

PIN Switching Diodes

Case 182 — TO-226AC (TO-92)

The following PIN diodes are designed for VHF band switching and general-purpose low current switching applications.

| Mfr.'s Type | V <sub>R(BRR)</sub> (V) Min. | C <sub>T</sub> @ V <sub>R</sub> @ 1.0 MHz |     | I <sub>R</sub> @ V <sub>R</sub> (nA) Max. | Series Resistance (Ω) Max. | Device Marking | Style |
|-------------|------------------------------|-------------------------------------------|-----|-------------------------------------------|----------------------------|----------------|-------|
|             |                              | (pF) Max.                                 | (V) |                                           |                            |                |       |
| MPN3404     | 20                           | 2.0                                       | 15  | 0.1 @ 25 V                                | 0.85 @ 10 mA               | —              | 1     |

Case 318-08 — TO-236AB (SOT-23)

|             |    |     |    |            |              |    |   |
|-------------|----|-----|----|------------|--------------|----|---|
| MMBV3401LT1 | 35 | 1.0 | 20 | 0.1 @ 25 V | 0.70 @ 10 mA | 4D | 8 |
|-------------|----|-----|----|------------|--------------|----|---|

General-Purpose Signal and Switching Diodes — Dual

Case 318-08 — TO-236AB (SOT-23)

The following is a listing of small-signal switching diodes in surface mount packages. These diodes are intended for low current switching and signal steering applications.

| Mfr.'s Type | Marking | V <sub>R(BRR)</sub>    |          |           | I <sub>R</sub>       |          | V <sub>F</sub> |                       |     | C <sub>T</sub> <sup>1</sup> Max. (pF) | t <sub>r</sub> Max. (ns) | Case Style |
|-------------|---------|------------------------|----------|-----------|----------------------|----------|----------------|-----------------------|-----|---------------------------------------|--------------------------|------------|
|             |         | @ I <sub>RR</sub> (μA) | Min. (V) | Max. (μA) | @ V <sub>R</sub> (V) | Min. (V) | Max. (V)       | @ I <sub>F</sub> (mA) |     |                                       |                          |            |
| MMBD7000LT1 | M5C     | 100.0                  | 100      | 0.300     | 50.0                 | 0.75     | 1.10           | 100                   | 1.5 | 4                                     | 11                       |            |
| MMBD6100LT1 | 5B8M    | 0.1                    | 70       | 0.100     | 50                   | 0.85     | 1.10           | 100                   | 2.5 | 4                                     | 9                        |            |
| BAV70LT1    | A4      | 70.0                   | 100      | 5.000     | 70.0                 | 0.75     | 1.00           | 50                    | 1.5 | 6                                     | 9                        |            |
| BAV99LT1    | A7      | 70.0                   | 100      | 2.500     | 70.0                 | —        | 1.00           | 50                    | 1.5 | 4                                     | 11                       |            |
| BAV56LT1    | A1      | 70.0                   | 100      | 2.500     | 70.0                 | —        | 1.00           | 50                    | 2.0 | 6                                     | 12                       |            |

Low-Leakage Medium Speed Switching Diodes — Single

Case 318-08 — TO-236AB (SOT-23)

|           |    |      |     |       |      |   |      |    |     |      |   |
|-----------|----|------|-----|-------|------|---|------|----|-----|------|---|
| BAS116LT1 | JV | 75.0 | 100 | 0.005 | 75.0 | — | 1.00 | 10 | 2.0 | 3000 | 8 |
|-----------|----|------|-----|-------|------|---|------|----|-----|------|---|