



BAS40 / -04 / -05 / -06

Surface Mount Schottky Barrier Diode

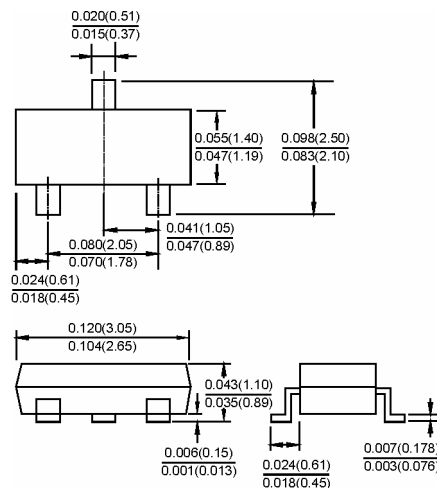
SOT-23

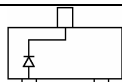
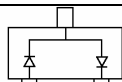
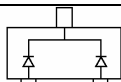
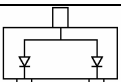
Features

- ✧ Low turn-on voltage
- ✧ Fast switching
- ✧ PN junction guard Ring for transient and ESD protection

Mechanical Data

- ✧ Case: SOT-23, Molded plastic
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Marking & Polarity: See diagram below
- ✧ Weight: 0.008 grams (approx.)



			
BAS40 Marking: 43h	BAS40-04 Marking: 44	BAS40-05 Marking: 45	BAS40-06 Marking: 46

Maximum Ratings T _A =25°C unless otherwise specified			
Type Number	Symbol	BAS40	Units
Peak Repetitive Reverse Voltage	V _{RRM}		
Working Peak Reverse Voltage	V _{RWM}	40	V
DC Blocking Voltage	V _R		
Forward Continuous Current (Note 1)	I _{FM}	200	mA
Non-Repetitive Peak Forward Surge Current @ t ≤1.0s	I _{FSM}	600	mA
Power Dissipation (Note 1)	P _d	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R θ JA	357	°C/W
Operating Junction Temperature Range	T _J	-55 to + 125	°C
Storage Temperature Range	T _{STG}	-65 to + 150	°C

Electrical Characteristics					
Type Number	Symbol	Min	Typ	Max	Units
Reverse Breakdown Voltage I _R =10uA	V(BR)	40	-	-	V
Reverse Leakage Current tp<300us, V _R =30V	I _R	--	20	200	nA
Forward Voltage Drop tp=300us, I _F =1.0mA tp<300us, I _F =40mA	V _F	--	-	380 1000	mV
Junction Capacitance V _R =0, f=1.0MHz	C _j	-	4.0	5.0	pF
Reverse Recovery Time (Note 2)	t _{rr}	-	--	5.0	nS

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.
2. Reverse Recovery Test Conditions: $I_F=I_R=10\text{mA}$, $I_{rr}=1.0\text{mA}$, $R_L=100\Omega$.

RATINGS AND CHARACTERISTIC CURVES (BAS40 / -04 / -05 / -06)

FIG.1- POWER DERATING CURVE

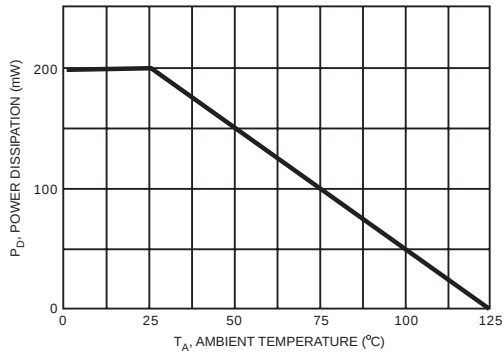


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

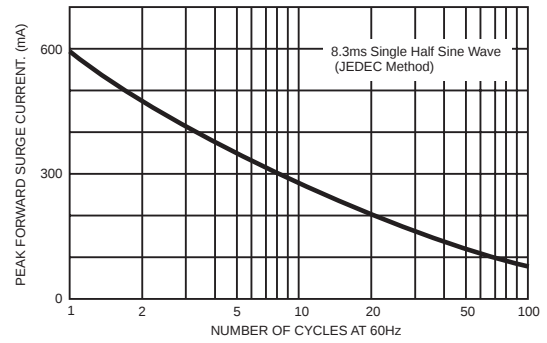


FIG.3- TYPICAL FORWARD CHARACTERISTICS

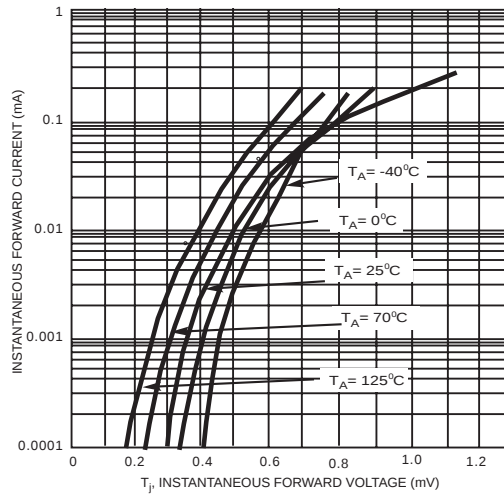


FIG.4- TYPICAL REVERSE CHARACTERISTICS

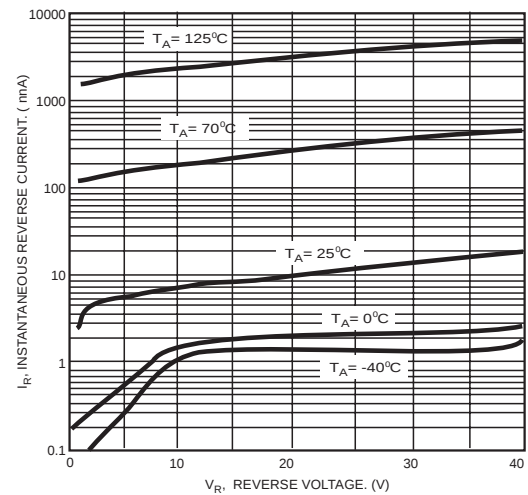


FIG.5- TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

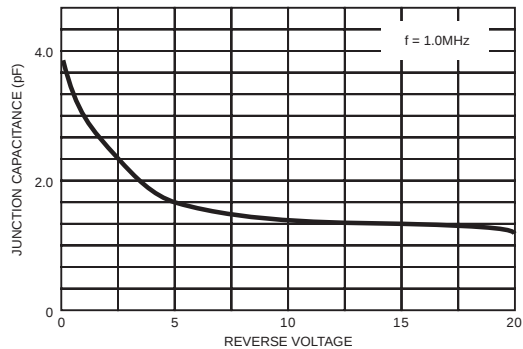
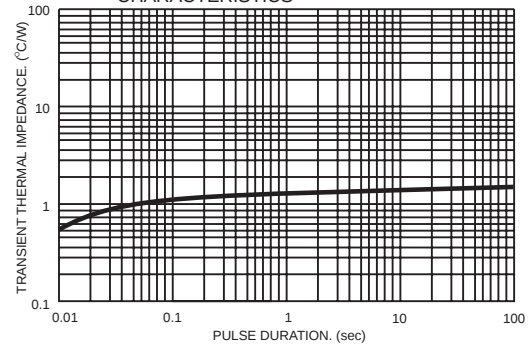


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



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