

Silicon Power Schottky Diode

$V_{RRM} = 20 \text{ V} - 100 \text{ V}$

$I_F = 160 \text{ A}$

Features

- High Surge Capability
- Types up to 100V V_{RRM}
- Isolated to Plate

TO-249AB Package



Maximum ratings, at $T_j = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	FST16045	FST16060	FST16080	FST160100	Unit
Repetitive peak reverse voltage	V_{RRM}		45	60	80	100	V
RMS reverse voltage	V_{RMS}		32	42	56	70	V
DC blocking voltage	V_{DC}		45	60	80	100	V
Continuous forward current	I_F	$T_C \leq 100^\circ\text{C}$	160	160	160	160	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	1200	1200	1200	1200	A
Operating temperature	T_j		-40 to 125	-40 to 125	-40 to 125	-40 to 125	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to 175	-40 to 175	-40 to 175	-40 to 175	$^\circ\text{C}$

Electrical characteristics, at $T_j = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	FST16045	FST16060	FST160380	FST160100	Unit
Diode forward voltage	V_F	$I_F = 160 \text{ A}$, $T_j = 25^\circ\text{C}$	0.75	0.8	0.88	0.88	V
Reverse current	I_R	$V_R = 20 \text{ V}$, $T_j = 25^\circ\text{C}$	1	1	1	1	mA
		$V_R = 20 \text{ V}$, $T_j = 125^\circ\text{C}$	10	10	10	10	

Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		1.0	1.0	1.0	1.0	$^\circ\text{C/W}$
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Figure .1-Typical Forward Characteristics

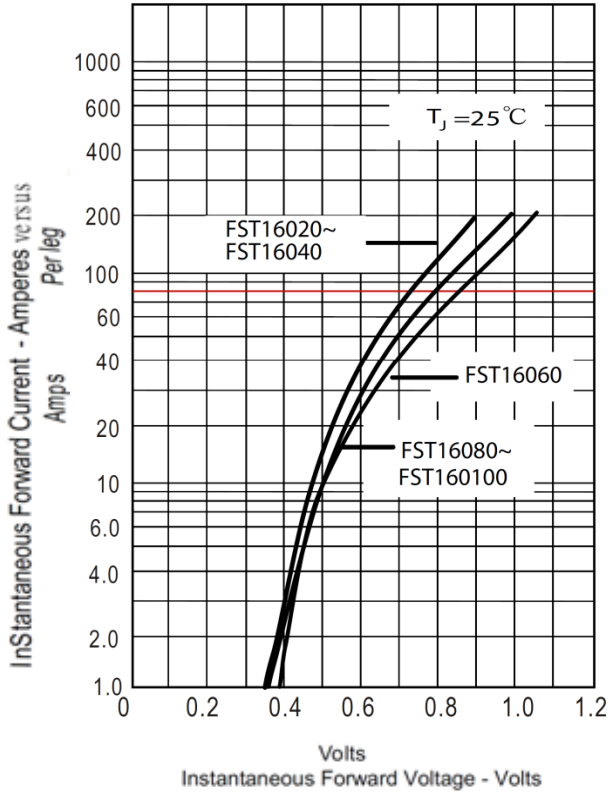


Figure .2-Forward Derating Curve

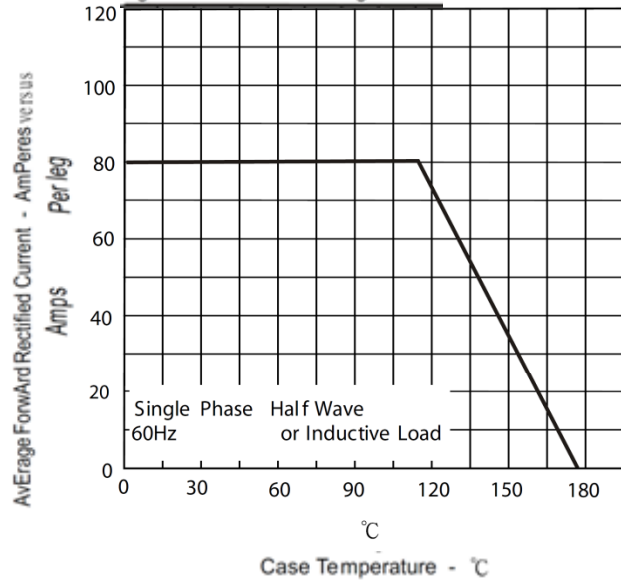


Figure .3- Peak Forward Surge Current

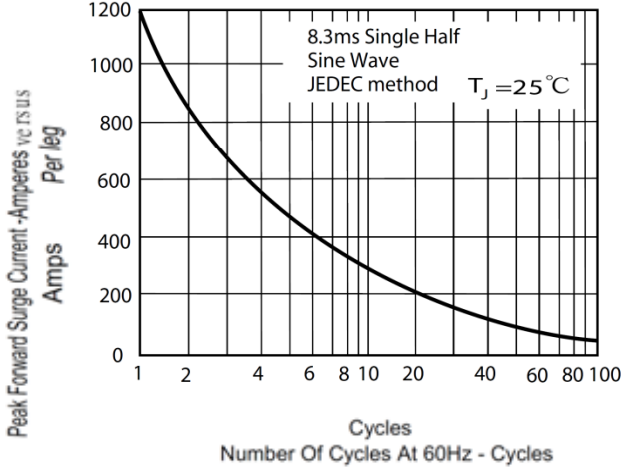
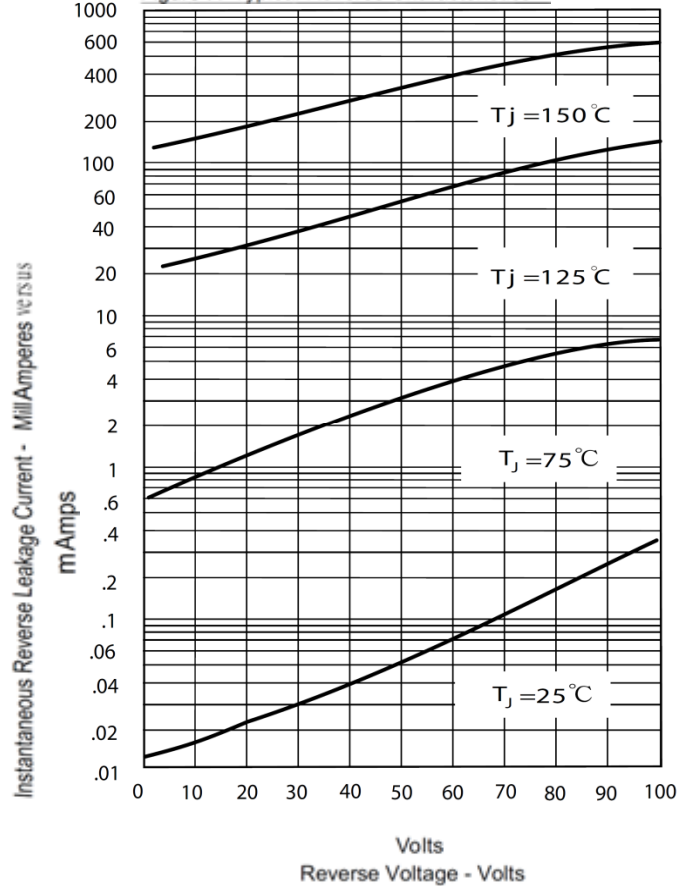


Figure .4-Typical Reverse Characteristics



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