

Silicon Power Schottky Diode

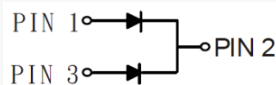
$V_{RRM} = 20\text{ V} - 40\text{ V}$

$I_{F(AV)} = 120\text{ A}$

Features

- High Surge Capability
- Types from 20 V to 40V V_{RRM}
- Isolated to Plate
- Not ESD Sensitive

TO-249AB Package



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

Parameter	Symbol	Conditions	FST12020	FST12030	FST12035	FST12040	Unit
Repetitive peak reverse voltage	V_{RRM}		20	30	35	40	V
RMS reverse voltage	V_{RMS}		14	21	25	28	V
DC blocking voltage	V_{DC}		20	30	35	40	V
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C

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

Parameter	Symbol	Conditions	FST12020	FST12030	FST12035	FST12040	Unit
Average forward current (per pkg)	$I_{F(AV)}$	$T_C = 125\text{ °C}$	120	120	120	120	A
Peak forward surge current (per leg)	I_{FSM}	$t_p = 8.3\text{ ms}$, half sine	1000	1000	1000	1000	A
Maximum instantaneous forward voltage (per leg)	V_F	$I_{FM} = 60\text{ A}$, $T_j = 25\text{ °C}$	0.70	0.70	0.70	0.70	V
Maximum Instantaneous reverse current at rated DC blocking voltage (per leg)	I_R	$T_j = 25\text{ °C}$	1	1	1	1	mA
		$T_j = 100\text{ °C}$	10	10	10	10	
		$T_j = 150\text{ °C}$	30	30	30	30	

Thermal characteristics

Thermal resistance, junction - case (per leg)	$R_{\theta JC}$		0.80	0.80	0.80	0.80	°C/W
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Figure .1- Typical Forward Characteristics

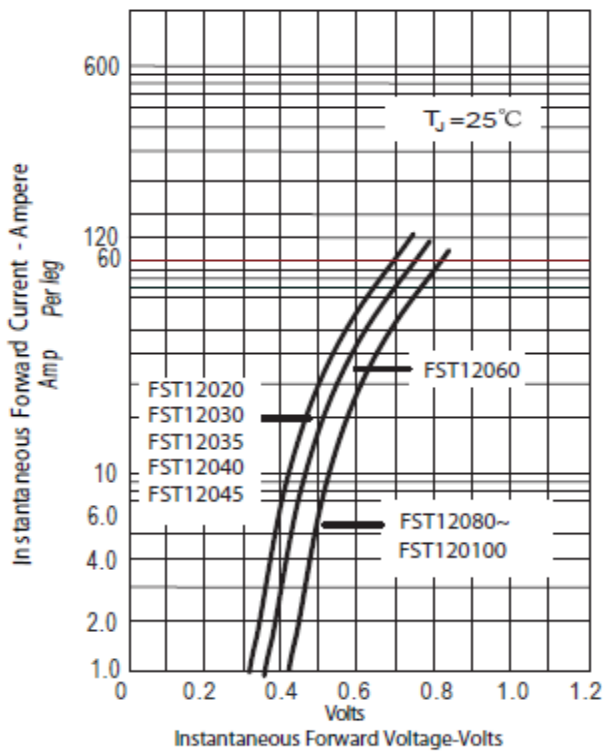


Figure .2- Forward Derating Curve

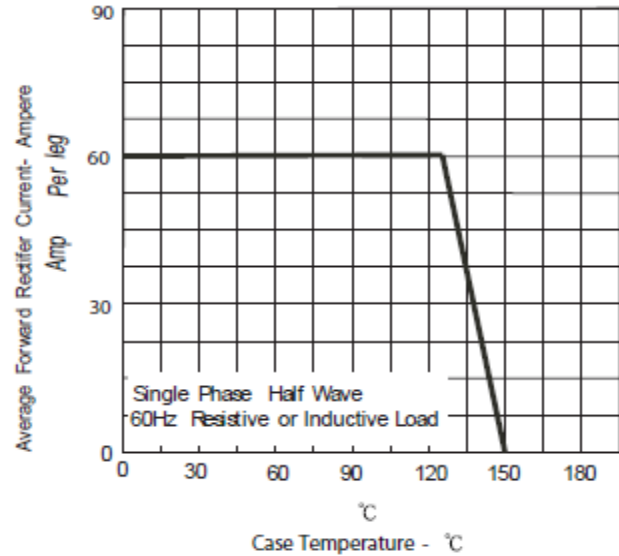


Figure.3-Peak Forward Surge Current

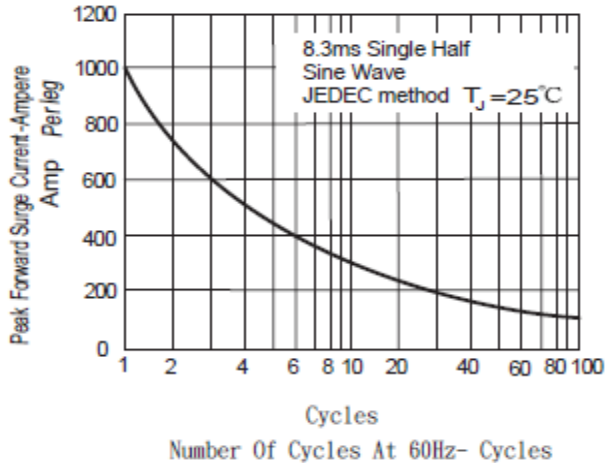
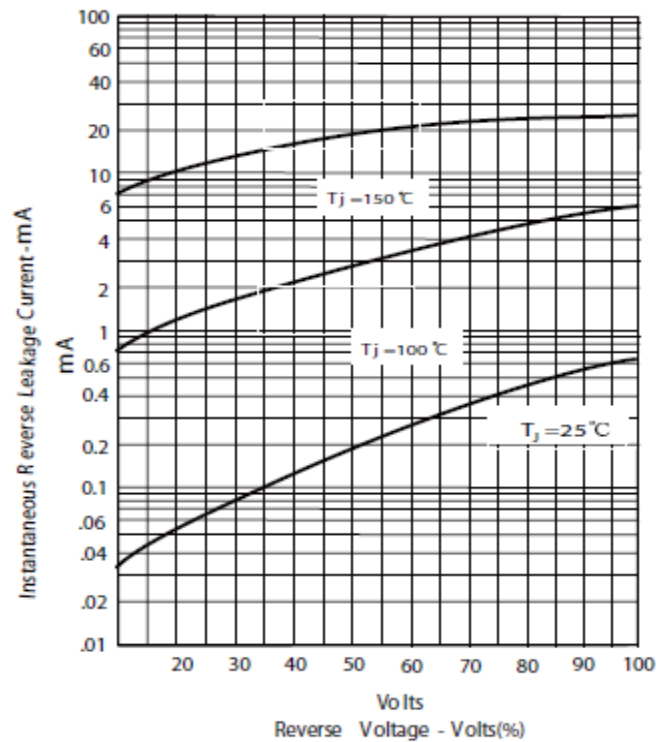
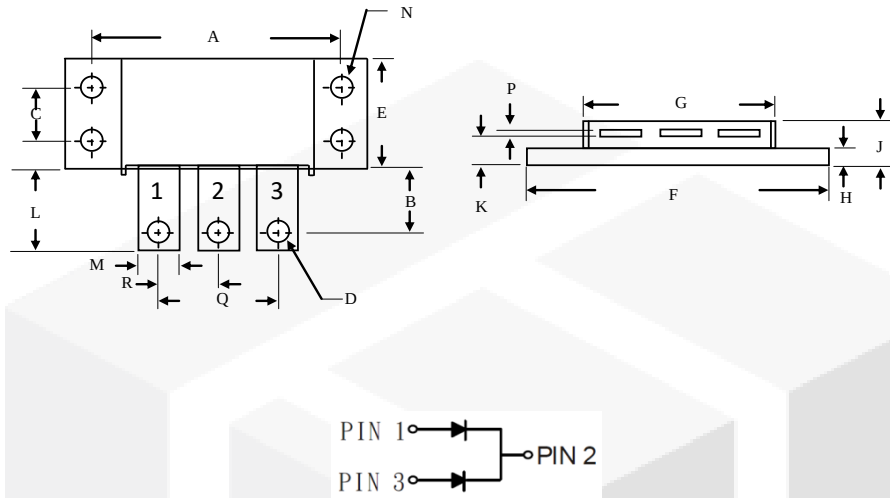


Figure .4- Typical Reverse Characteristics



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



	Inches		Millimeters	
	Min	Max	Min	Max
A	1.995	2.005	50.67	50.93
B	0.300	0.325	7.62	8.26
C	0.495	0.505	12.57	12.83
D	0.182	0.192	4.62	4.88
E	0.990	1.010	25.15	26.65
F	2.390	2.410	60.71	61.21
G	1.495	1.525	37.90	38.70
H	0.114	0.122	2.90	3.10
J	-----	0.420	-----	10.67
K	0.256	0.275	6.5	7.0
L	0.490	0.510	12.45	12.95
M	0.330	0.350	8.38	8.90
N	0.175	0.195	4.45	4.95
P	0.035	0.045	0.89	1.14
R	0.445	0.455	11.30	11.56
Q	0.890	0.910	22.61	23.11