Pb Free Plating Product

SK1035 thru SK1020

10.0 Ampere Surface Mount Round Lead Schottky Barrier Rectifier Diodes

FEATURE

- Standard MBR matured technology with high reliablity
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250℃/10 seconds at terminals

MECHANICAL DATA

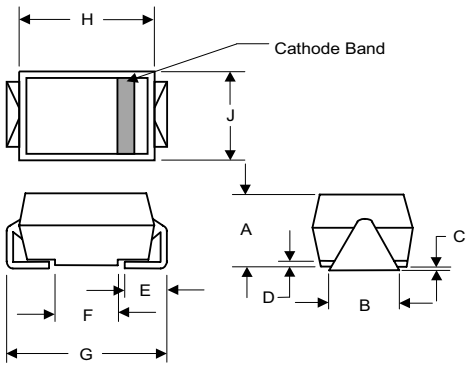
Case: HSMC/SMC-W Package
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode band
Mounting Position: Any
Weight: 0.22 gram approximately

APPLICATION

- LED SMPS/Industrial power supply
- HID ballast stabilizer
- Telecommunication SMPS/LED street lamp

OUTLINE

Unit:inch(millimeter)



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	0.200	0.214	5.08	5.43	
B	0.177	0.203	4.70	5.30	
C	0.002	0.005	0.05	0.13	
D	---	0.02	---	0.51	
E	0.047	0.056	1.20	1.42	
F	0.168	0.179	4.27	4.55	
G	0.309	0.322	7.85	8.18	
H	0.239	0.243	6.08	6.18	
J	0.234	0.240	5.95	6.10	

DIMENSIONS

HSMC/SMC-W

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

PARAMETER	SYMBOL	SK 1035	SK 1045	SK 105	SK 106	SK 109	SK 1010	SK 1015	SK 1020	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS voltage	V_{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC blocking voltage	V_{DC}	35	45	50	60	90	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	10								A
Peak repetitive forward current (Rated VR, Square Wave, 20KHz)	I_{FRM}	20								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	150								A
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1.0		0.5						A
Maximum instantaneous forward voltage (Note 2) I_F=10A, T_J=25℃ I_F=10A, T_J=125℃	V_F	0.70 0.57		0.80 0.70		0.85 0.71		1.05 -		V
Maximum reverse current @ rated VR T_J=25 ℃ T_J=125 ℃	I_R	0.1 15		10		6				mA
Voltage rate of change (Rated V_R)	dV/dt	10000								V/μs
Typical thermal resistance	$R_{\theta JC}$	17								°C/W
Operating junction temperature range	T_J	- 55 to +150								°C
Storage temperature range	T_{STG}	- 55 to +175								°C

Note 1: tp = 2.0 μs, 1.0KHz

Note 2: Pulse test with PW=300μs, 1% duty cycle

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RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1- FORWARD CURRENT DERATING CURVE

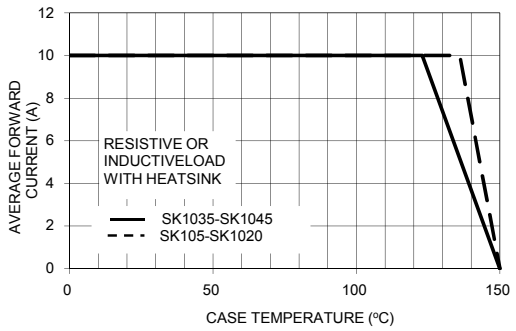


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

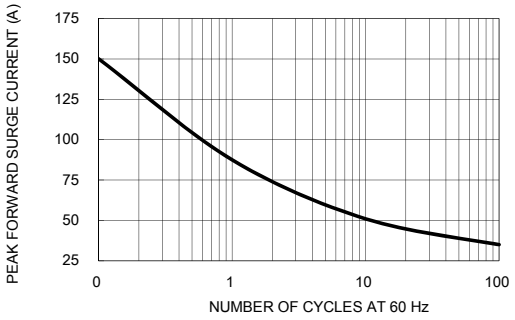


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

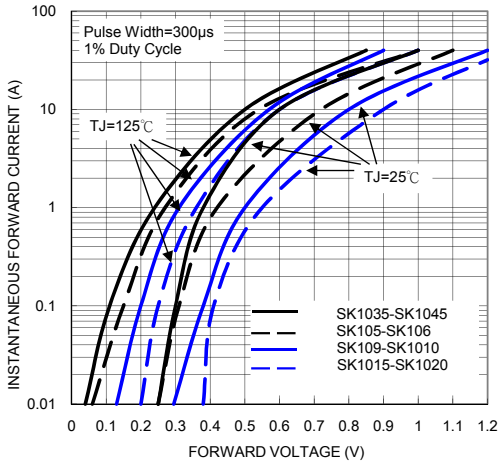


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

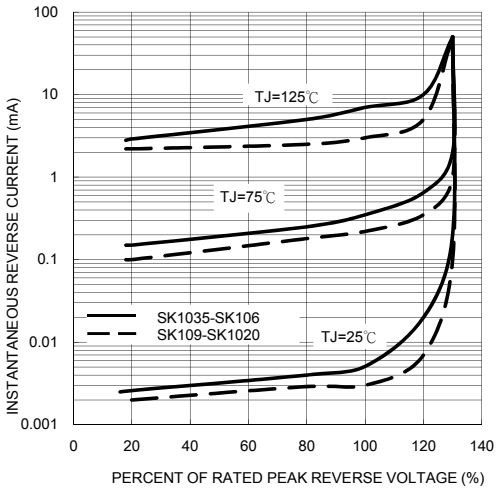


FIG. 5- TYPICAL JUNCTION CAPACITANCE

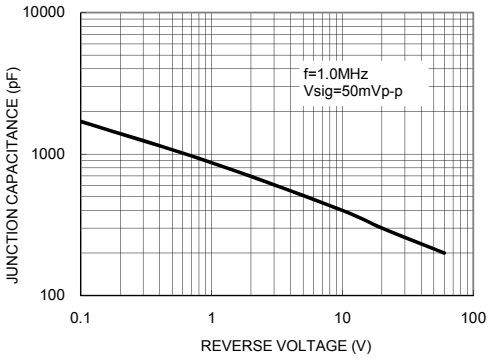
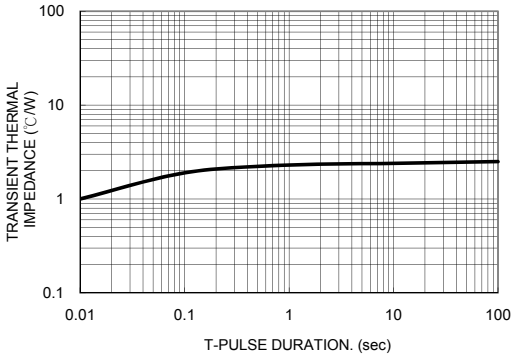


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTIC



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