

## 20A, 45V Schottky Barrier Rectifier

### FEATURES

- Low forward voltage drop
- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- For use as Bypass diode in Solar application.
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



**R-6**



### MECHANICAL DATA

**Case:** R-6

Molding compound, UL flammability classification rating 94V-0

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Pure tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

**Weight:** 1.6 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	SK20H45	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	45	V
Maximum RMS voltage	V <sub>RMS</sub>	31	V
Maximum DC blocking voltage	V <sub>DC</sub>	45	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	20	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	275	A
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 20 A	V <sub>F</sub>	0.55	V
Maximum reverse current @ rated V <sub>R</sub>	I <sub>R</sub>	0.5 50	mA
Typical thermal resistance	R <sub>θJL</sub>	6	°C/W
Junction temperature range - in DC forward mode	T <sub>J</sub>	<=200	°C
Storage temperature range	T <sub>STG</sub>	- 50 to +175	°C

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

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
SK20H45	H	A0	G	R-6	700 / Ammo box
		R0		R-6	1000 / 13" Paper reel
		B0		R-6	400 / Bulk packing

\*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SK20H45HA0G	SK20H45	H	A0	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub>=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

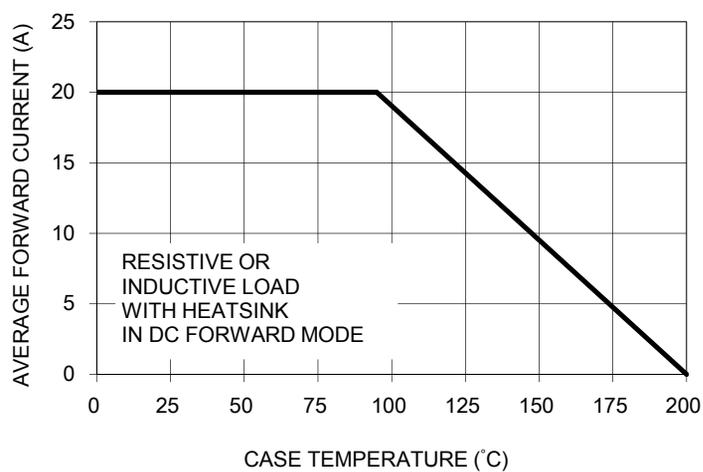


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG. 3 TYPICAL FORWARD CHARACTERISTICS

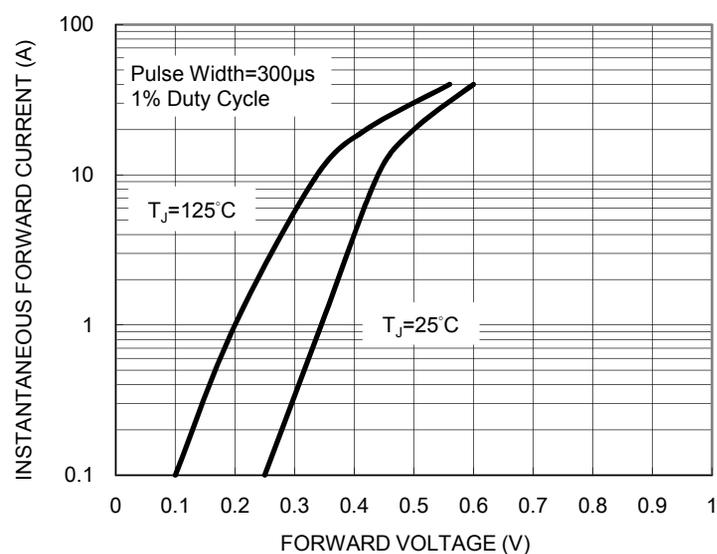


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

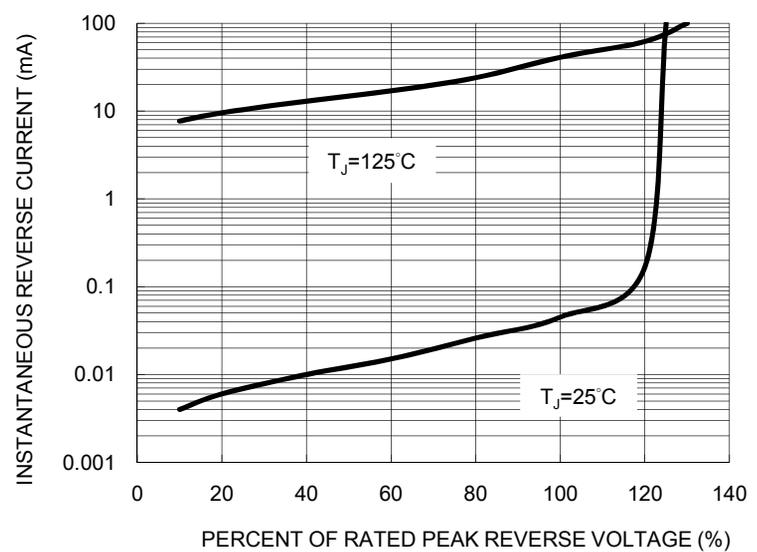
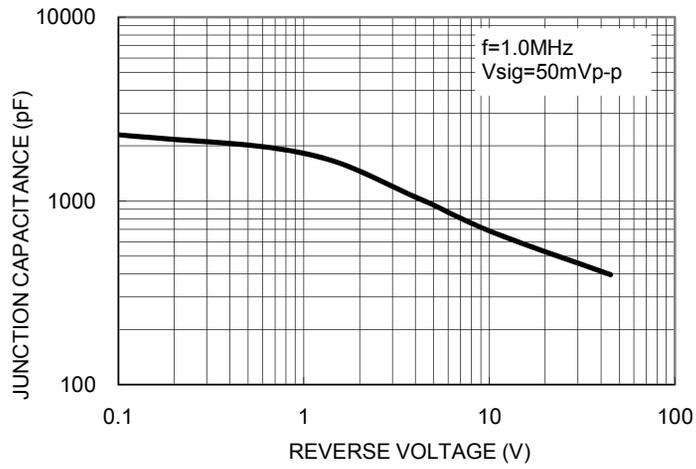
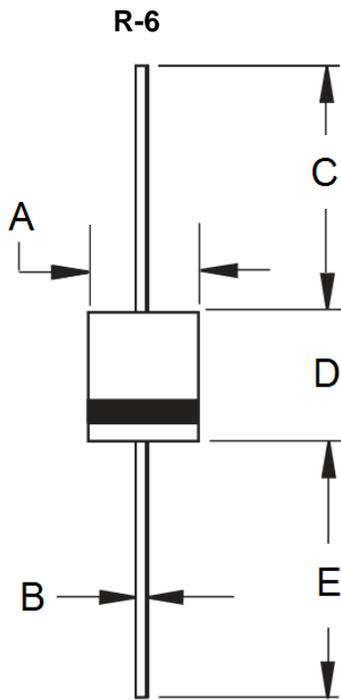


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	6.80	7.20	0.268	0.283
B	1.20	1.30	0.047	0.051
C	25.40	-	1.000	-
D	8.60	9.10	0.339	0.358
E	25.40	-	1.000	-

MARKING DIAGRAM



P/N = Specific Device Code  
 G = Green Compound  
 YWW = Date Code  
 F = Factory Code

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