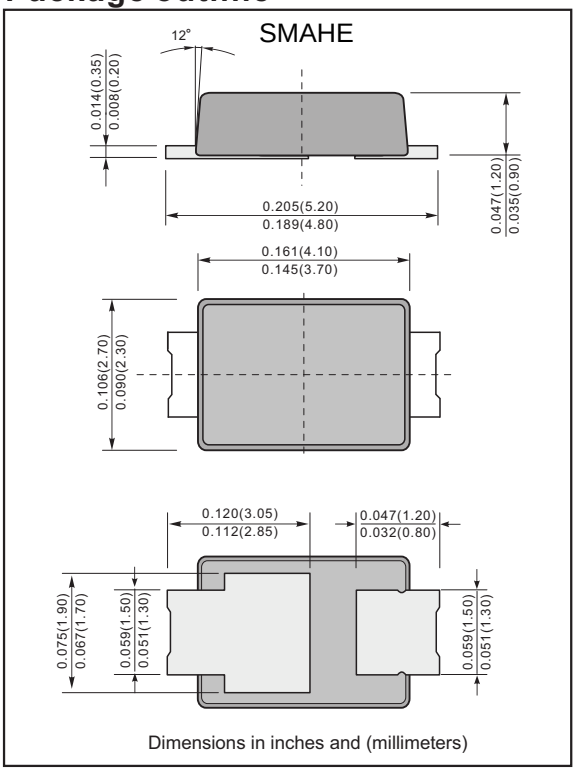
SS54-AHE-C THRU SS520-AHE-C

5.0A Surface Mount Schottky Barrier Rectifiers- 40-200V

Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guardring for overvoltage protection
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction
- Lead-free parts meet RoHS requirements
- Compliant to Halogen-free

Package outline



Dimensions in inches and (millimeters)

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic,SMAHE
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Maximum ratings and Electrical characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			5.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			120	A
Reverse current	V_R = V_{RRM} T_a = 25°C	I_R			1.0	mA
	V_R = V_{RRM} T_a = 100°C				50	
Thermal resistance(1)	Junction to ambient	$R_{\theta JA}$		95		°C/W
	Junction to case	$R_{\theta JC}$		20		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		280		pF
Storage temperature		T_{STG}	-55		+150	°C

(1) P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	Operating temperature T_J, (°C)
SS54-AHE-C	40	28	40	0.55	-55 to +150
SS56-AHE-C	60	42	60	0.70	
SS510-AHE-C	100	70	100	0.85	
SS515-AHE-C	150	105	150	0.95	
SS520-AHE-C	200	140	200		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@I_F=5.0A

Rating and characteristic curves

Fig.1 Forward Current Derating Curve

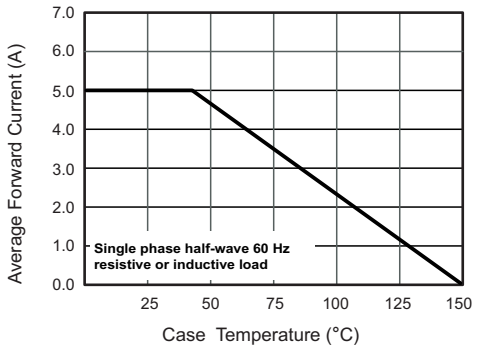


Fig.2 Typical Reverse Characteristics

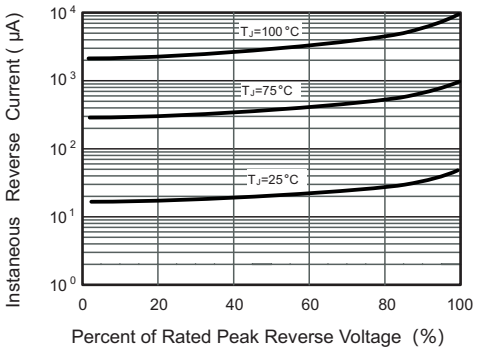


Fig.3 Typical Forward Characteristic

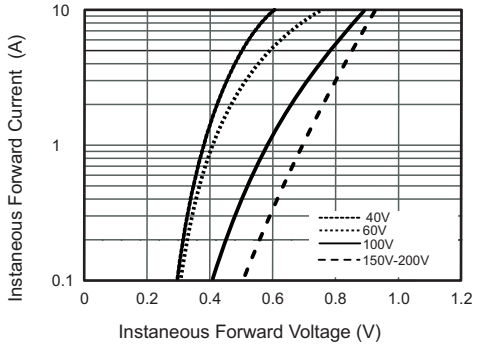


Fig.4 Typical Junction Capacitance

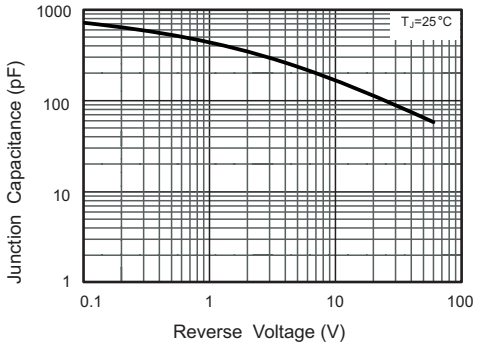
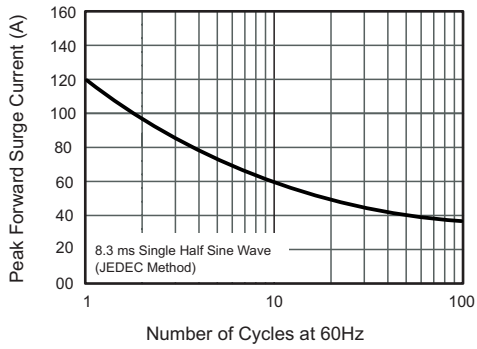


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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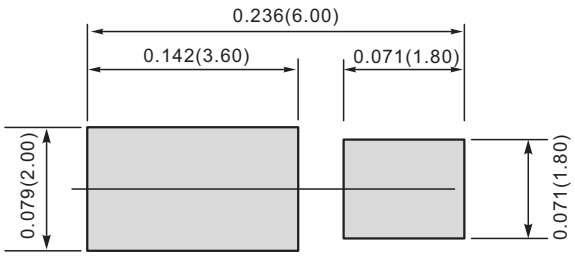
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SS54-AHE-C	SS54
SS56-AHE-C	SS56
SS510-AHE-C	SS510
SS515-AHE-C	SS515
SS520-AHE-C	SS520

Suggested solder pad layout



Dimensions in inches and (millimeters)