SK52AS THRU SK520AS

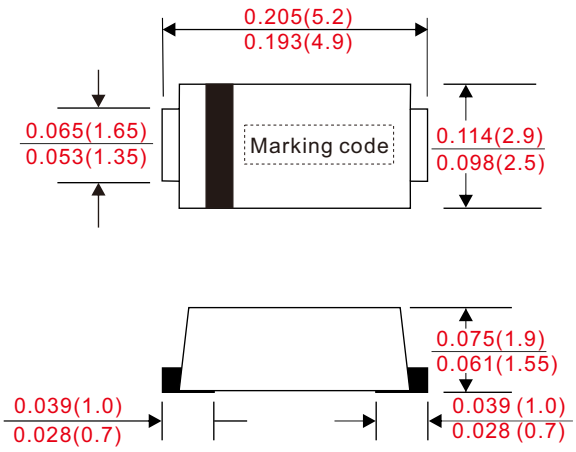
5A Surface Mount Schottky Barrier Rectifiers

■ Features

- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Suffix "G" indicates Halogen-free part, ex.SK52AG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Outline

SMAS(DO-214AC)



Dimensions in inches and (millimeters)

■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AC / SMAS
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : Approximated 0.08 gram

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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 superimposed on rate load (JEDEC method)	I_{FSM}			100	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25°C$	I_R			0.5	mA
	$V_R = V_{RRM}$ $T_A = 100°C$				20	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J	TYP. 380@20V TYP. 300@40V~200V			pF
Thermal resistance	Junction to ambient	$R_{\theta JA}$		24		°C/W
Storage temperature		T_{STG}	-55		+150	°C

Symbol	Marking code	Max. repetitive peak reverse voltage V_{RRM} (V)	Max. RMS voltage V_{RMS} (V)	Max. DC blocking voltage V_R (V)	Max. forward voltage @5A, $T_A = 25°C$ V_F (V)	Operating Junction temperature T_J (°C)
SK52AS	SK52	20	14	20	0.50	-55 ~ +150
SK54AS	SK54	40	28	40	0.55	
SK56AS	SK56	60	42	60	0.70	
SK510AS	SK510	100	70	100	0.85	
SK515AS	SK515	150	105	150	0.87	-55 ~ +175
SK520AS	SK520	200	140	200	0.90	

■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

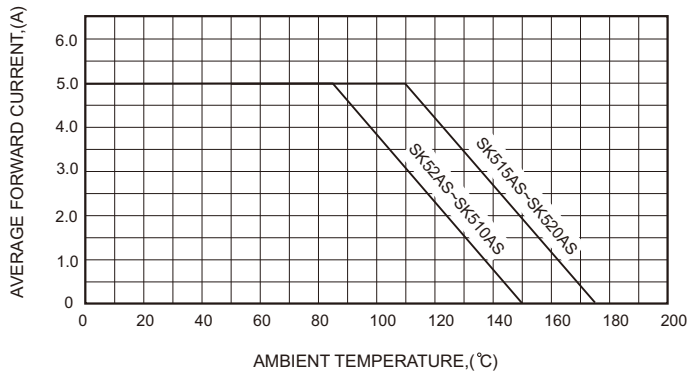


FIG.2-TYPICAL FORWARD CHARACTERISTICS

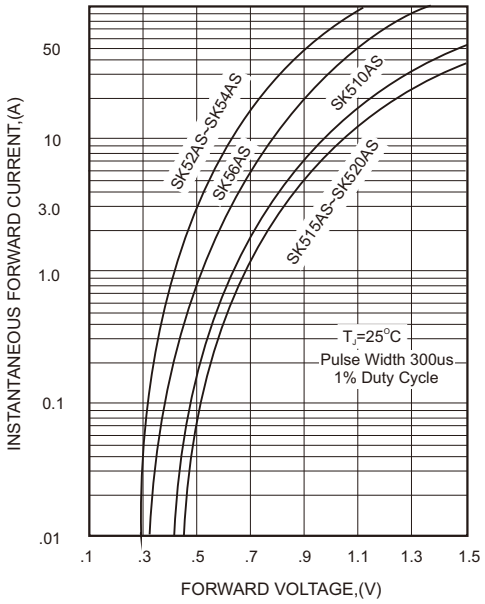


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

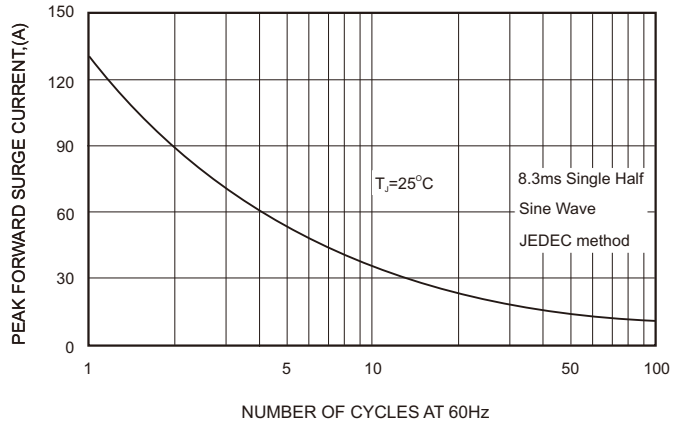


FIG.4-TYPICAL JUNCTION CAPACITANCE

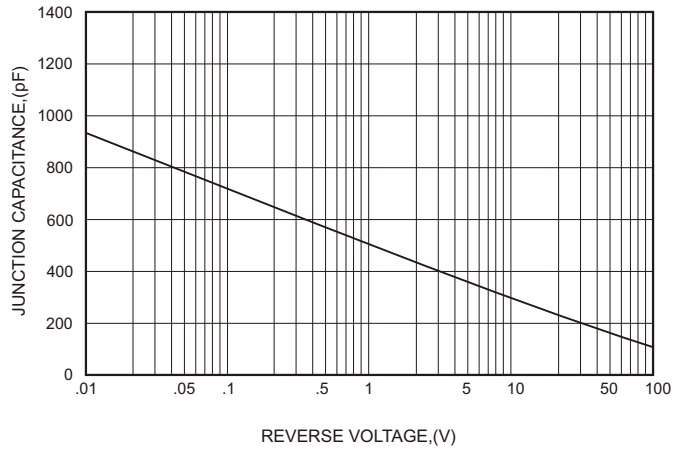
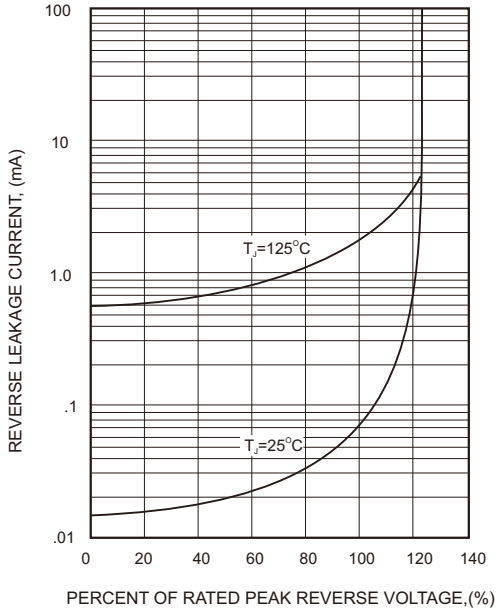
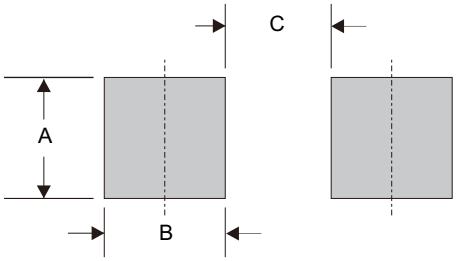


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



■ SMAS foot print



A	B	C
0.063 (1.60)	0.059 (1.50)	0.110 (2.80)

Dimensions in inches and (millimeters)

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