



SL52C THRU SL510C

Reverse Voltage - 20 to 100 Volts Forward Current - 5.0 Ampere

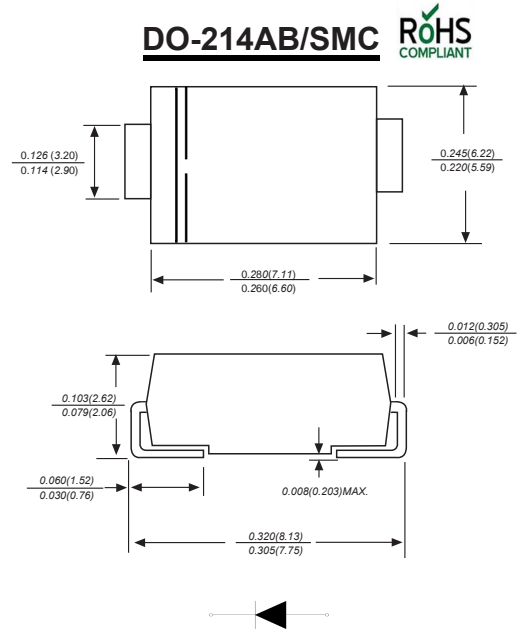
SURFACE MOUNT SCHOTTKY BARRIER DIODES

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
260°C/10 seconds at terminals

Mechanical Data

Case : JEDEC DO-214AB/SMC Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.007ounce, 0.25 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SL52C	SL53C	SL54C	SL55C	SL56C	SL58C	SL510C	UNITS
		MDD SL52C	MDD SL53C	MDD SL54C	MDD SL55C	MDD SL56C	MDD SL58C	MDD SL510C	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum average forward rectified current at $T_L=90^\circ\text{C}$	$I_{(AV)}$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	120							A
Maximum instantaneous forward voltage at 5.0A	V_F	0.45			0.50		0.70		V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	0.5 20.0					0.2 10.0		mA
Typical junction capacitance (NOTE 1)	C_J	200							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	55.0							$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 5 5 t o + 1 2 5					-55 to +150		$^\circ\text{C}$
Operating storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



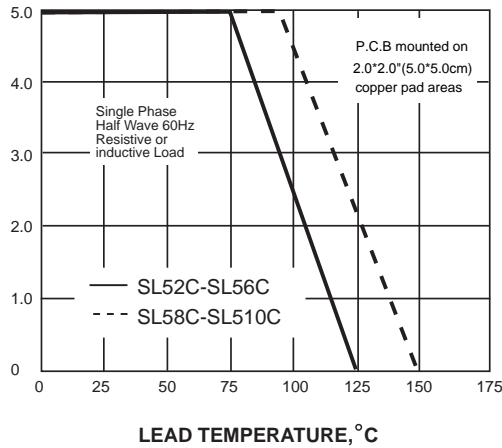
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Ratings And Characteristic Curves

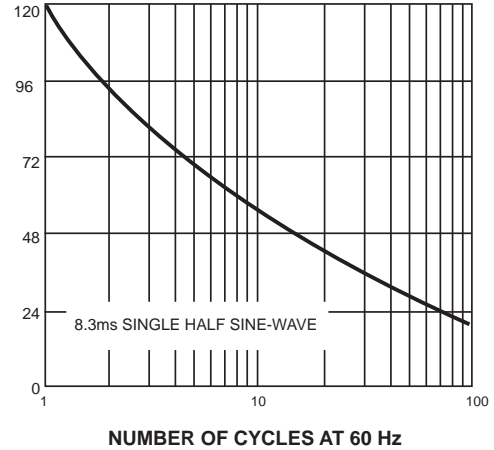
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



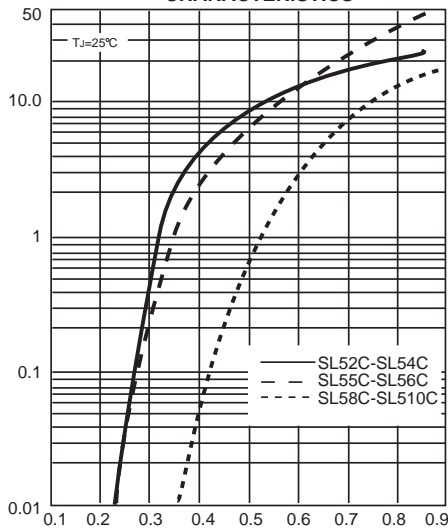
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



INSTANTANEOUS FORWARD CURRENT, AMPERES

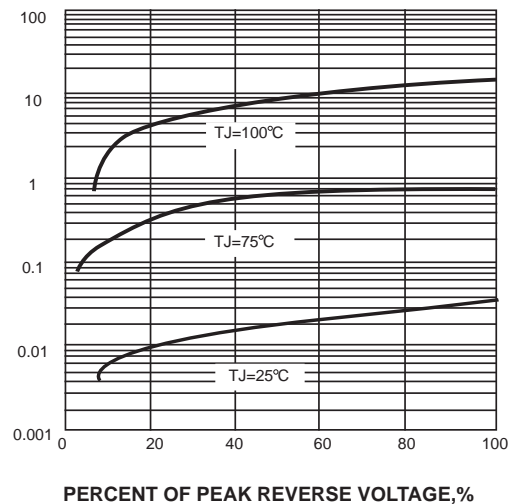
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

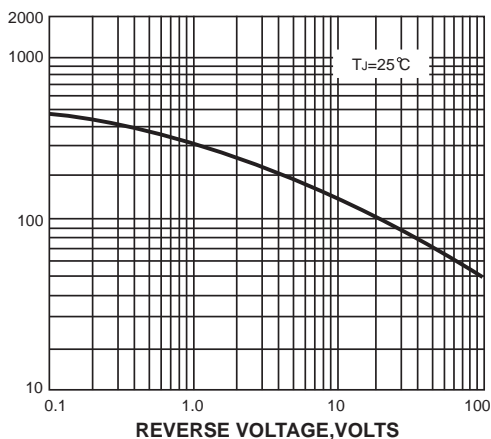
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

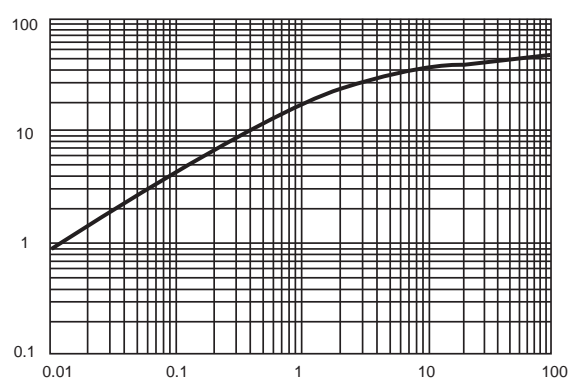
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.

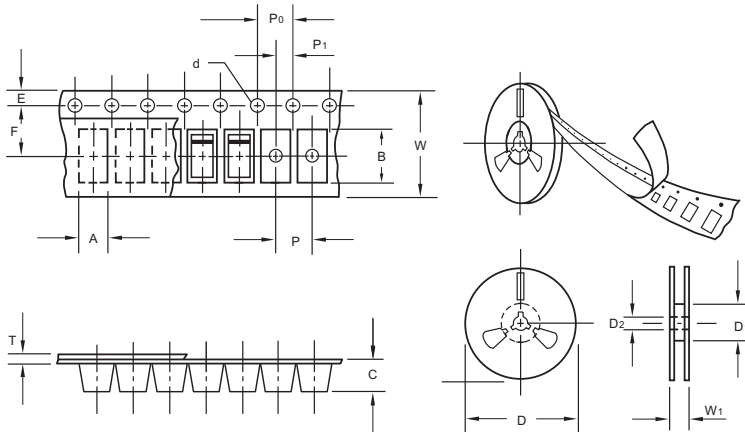
The curve above is for reference only.



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Packing information



unit:mm

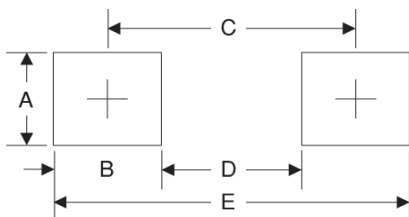
Item	Symbol	Tolerance	SMC
Carrier width	A	0.1	6.15
Carrier length	B	0.1	8.41
Carrier depth	C	0.1	2.42
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D ₁	min	50.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	7.50
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	16.00
Reel width	W ₁	1.0	16.50

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMC	13"	3,000	4.0	6000	190*190*41	330	365*365*340	42000	14.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	4.3	0.170
B	4.1	0.160
C	7.9	0.311
D	3.8	0.150
E	12	0.472

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