

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

**FEATURES**

- High Current Capability
- Extremely Low Reverse Current
- For Surface Mount Application
- Higher Temp Soldering : 250 °C for 10 Seconds at Terminals
- Low Forward Voltage
- Case: Molded Plastic

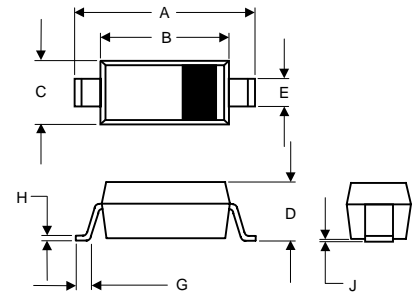
Marking :

SCS0520RP : SD  
SCS0540RP : SF

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.55	3.85	0.140	0.152
B	2.55	2.85	0.100	0.112
C	1.40	1.80	0.550	0.071
D	-----	1.15	-----	0.045
E	0.30	0.78	0.120	0.031
G	0.15	-----	0.006	-----
H	-----	0.25	-----	0.001
J	-----	0.15	-----	0.006

**PACKAGE DIMENSIONS**

SOD-123  
PLASTIC PACKAGE



**Maximum Ratings and Electrical Characteristics, Single Diode @T<sub>A</sub>=25°C**

Parameter	Symbol	SCS0520RP	SCS0540RP	Unit
Peak Repetitive Peak reverse voltage	V <sub>RRM</sub>			
Working Peak Reverse Voltage	V <sub>RWM</sub>	20	40	V
DC Blocking Voltage	V <sub>R</sub>			
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	28	V
Average Rectified Output Current	I <sub>O</sub>	500		mA
Peak forward surge current	I <sub>FSM</sub>	5.5		A
Power Dissipation	P <sub>d</sub>	410		mW
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	244		K/W
Storage temperature	T <sub>STG</sub>	-65~+150		°C
Voltage Rate of Change	dv/dt	1000		V/μs

**Electrical Ratings @T<sub>A</sub>=25°C**

Parameter	Symbol	SCS0520RP	SCS0540RP	Unit	Conditions
Minimum Reverse Breakdown Voltage	V <sub>(BR)R</sub>	20	-	V	I <sub>R</sub> =250μA
		-	-		I <sub>R</sub> =130μA
		-	40		I <sub>R</sub> =20μA
Forward voltage	V <sub>F1</sub>	0.3	-	V	I <sub>F</sub> =0.1A
	V <sub>F2</sub>	0.385	0.510		I <sub>F</sub> =0.5A
	V <sub>F3</sub>	-	0.62		I <sub>F</sub> =1A
Reverse current	I <sub>R1</sub>	75	-	μA	V <sub>R</sub> =10V
	I <sub>R2</sub>	-	-		V <sub>R</sub> =15V
Reverse current	I <sub>R3</sub>	250	10	μA	V <sub>R</sub> =20V
	I <sub>R4</sub>	-	-		V <sub>R</sub> =30V
	I <sub>R5</sub>	-	20		V <sub>R</sub> =40V
Capacitance between terminals	C <sub>T</sub>		170	pF	V <sub>R</sub> =1V, f=1MHz
Reverse Recovery Time	t <sub>rr</sub>		4	ns	I <sub>F</sub> =I <sub>R</sub> =10mA I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100

● RATING AND CHARACTERISTIC CURVES (SCS0520RP THRU SCS0540RP)

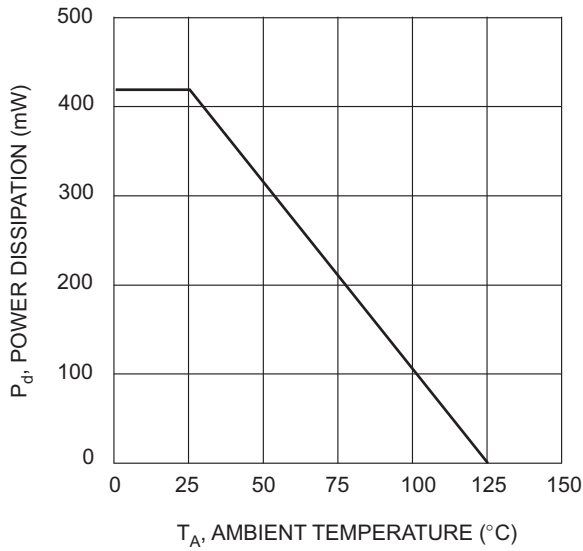


Fig. 1 Power Derating Curve

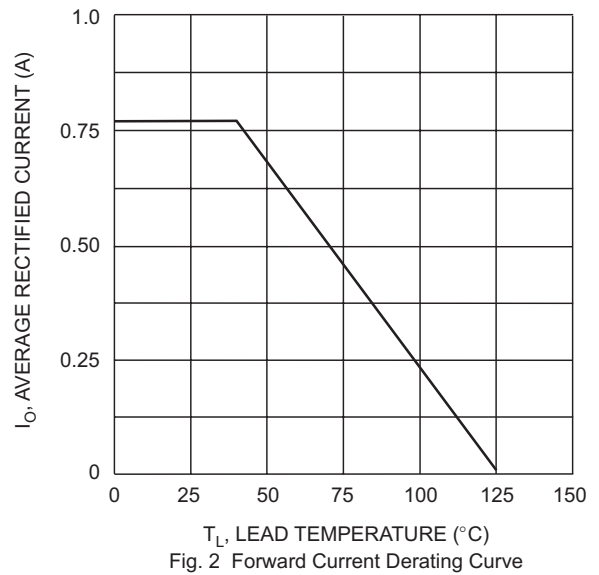


Fig. 2 Forward Current Derating Curve

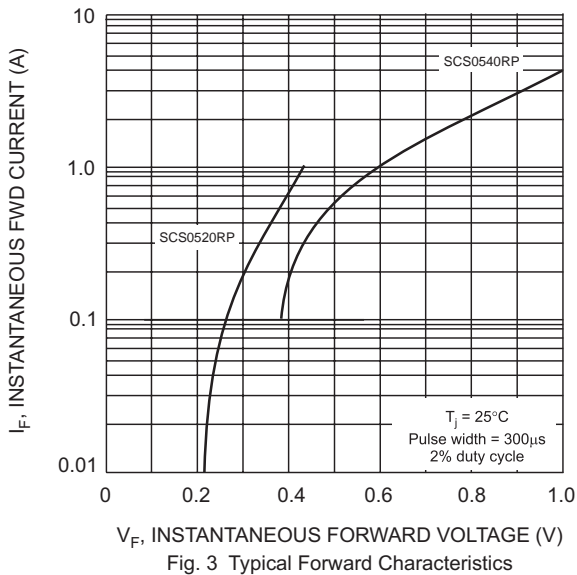


Fig. 3 Typical Forward Characteristics

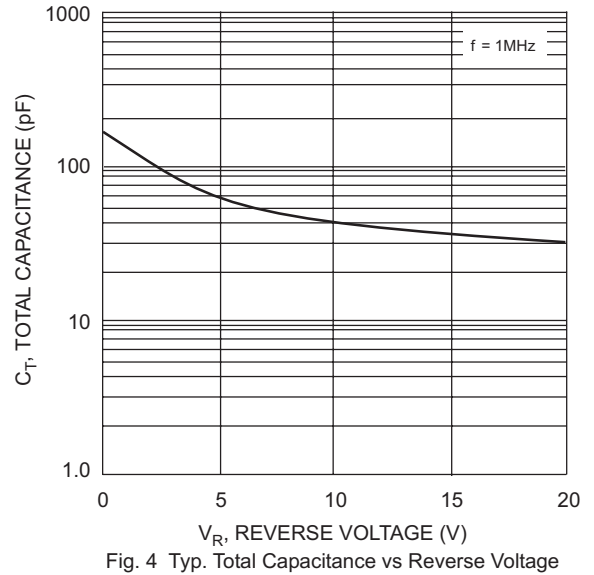


Fig. 4 Typ. Total Capacitance vs Reverse Voltage