Elektronische Bauelemente

SCS0520V THRU SCS0540V

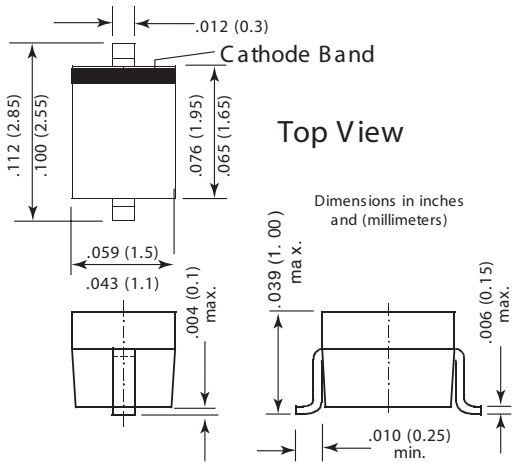
VOLTAGE 20V ~ 40V

0.5 AMP Schottky Barrier Rectifiers

RoHS Compliant Product

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

SOD-323(SC-76)



FEATURES

*Low Forward Voltage Drop
*Guard Ring Construction forTransient Protection
*High Conductance
*Also Available in Lead Free Version

MARKING: SCS0520V: SD
SCS0530V: SE
SCS0540V: SF

Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25°C

Parameter	Symbol	SCS0520V	SCS0530V	SCS0540V	Unit
Peak Repetitive Peak reverse voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current	I_O	500			mA
Peak forward surge current	I_{FSM}	5.5			A
Power Dissipation	Pd	410			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	244			K/W
Storage temperature	T_{STG}	-65~+150			℃
Voltage Rate of Change	dv/dt	1000			V/μs

Electrical Ratings @T_A=25°C

Parameter	Symbol	SCS0520V	SCS0530V	SCS0540V	Unit	Conditions
Minimum Reverse Breakdown Voltage	$V_{(BR)R}$	20	-	-	V	I_R=250μA
		-	30	-		I_R=130μA
		-	-	40		I_R=20μA
Forward voltage	V_{F1}	0.3	-		V	I_F=0.1A
	V_{F2}	0.385	0.50			I_F=0.5A
	V_{F3}	-	0.58			I_F=1A
Reverse current	I_{R1}	75	-		μA	V_R=10V
	I_{R2}	-	20			V_R=15V
	I_{R3}	250	40		μA	V_R=20V
	I_{R4}	-	60			V_R=30V
	I_{R5}	-	80			V_R=40V
Capacitance between terminals	C_T	-	170		pF	V_R=1V,f=1MHz
Reverse Recovery Time	t_{rr}	-	4		ns	I_F=I_R=10mA Irr=0.1XI_R,R_L=100

RATING AND CHARACTERISTIC CURVES (SCS0520V THRU SCS0540V)

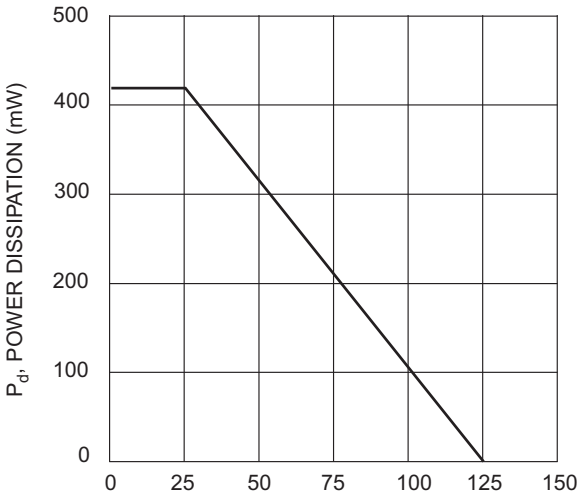


Fig. 1 Power Derating Curve

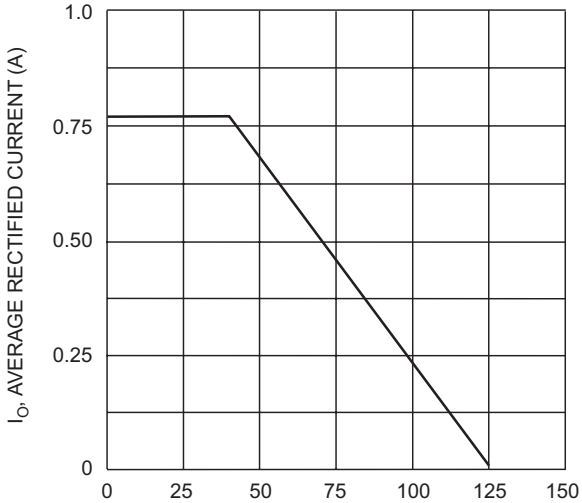


Fig. 2 Forward Current Derating Curve

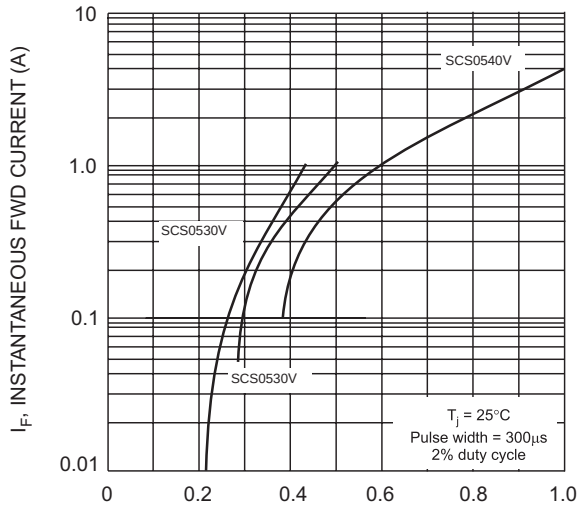


Fig. 3 Typical Forward Characteristics

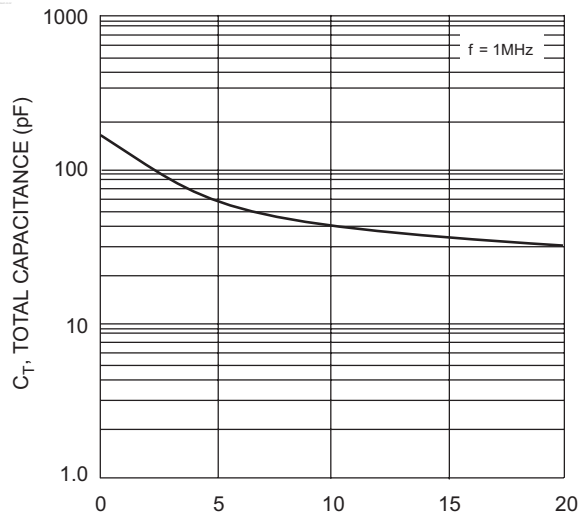


Fig. 4 Typ. Total Capacitance vs Reverse Voltage