Elektronische Bauelemente

QG501C ~ QG507C

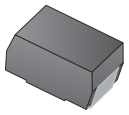
50 ~ 1000 V

5.0 Amp Surface Mount Silicon General Purpose Rectifiers

RoHS Compliant Product

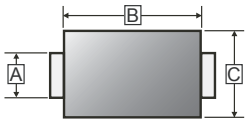
A suffix of "-C" specifies halogen-free and RoHS Compliant

SMC(DO-214AB)



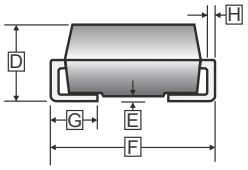
FEATURES

- Glass passivated junction
- High surge current capability
- Low reverse current
- Component in accordance to RoHS 2002/95/EC



MECHANICAL DATA

- Cases：SMC(DO-214AB)
- Case Material：Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals：Lead Free Plating(Tin Finish) Solderable Per MIL-STD-202, Method 208
- Polarity：Cathode Band



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.750	3.250	E	-	0.203
B	6.520	7.110	F	7.640	8.130
C	5.50	6.220	G	0.750	1.520
D	1.980	2.620	H	0.150	0.305

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Parameters		Symbol	Part Number							Units
			QG 501C	QG 502C	QG 503C	QG 504C	QG 505C	QG 506C	QG 507C	
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current		I_F	5.0							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	125							A
Maximum Instantaneous Forward Voltage @ I_F=5A		V_F	1.15							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	TA=25°C	I_R	5							μA
	TA=100°C		50							
Typical Junction Capacitance [1]		C_J	60							pF
Thermal Resistance Junction to Ambient [2]		$R_{\theta JA}$	28							°C / W
Thermal Resistance Junction to Lead [2]		$R_{\theta JL}$	5							°C / W
Storage and Operating Temperature Range		T_J , T_{STG}	-55 ~ 150, -55 ~ 150							°C

Notes：

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
2. FR4 Board Heat sink size: 30*30mm.

MAXIMUM RATINGS CURVES

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

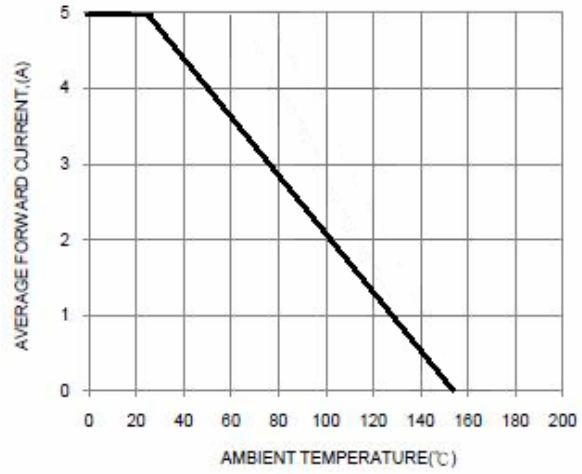


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

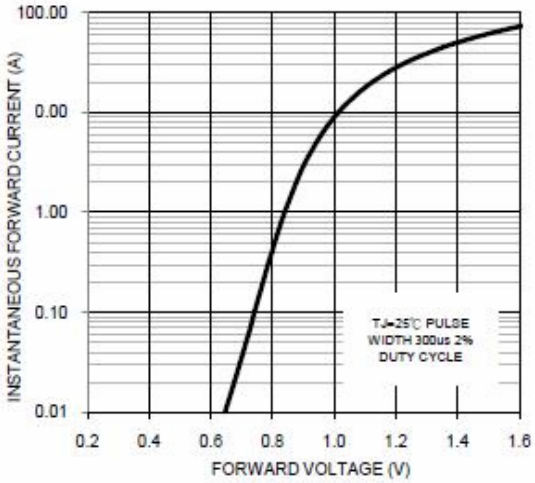


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

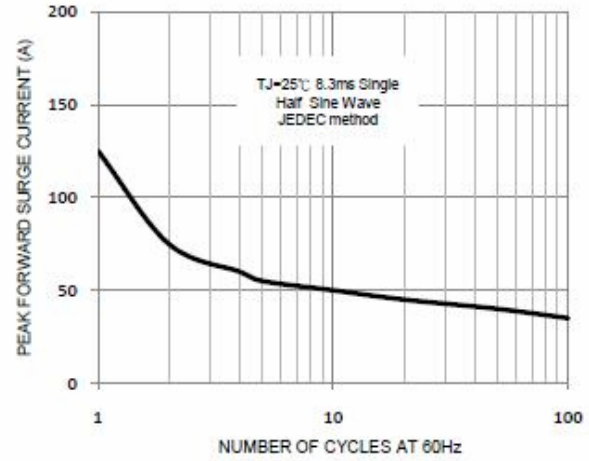


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

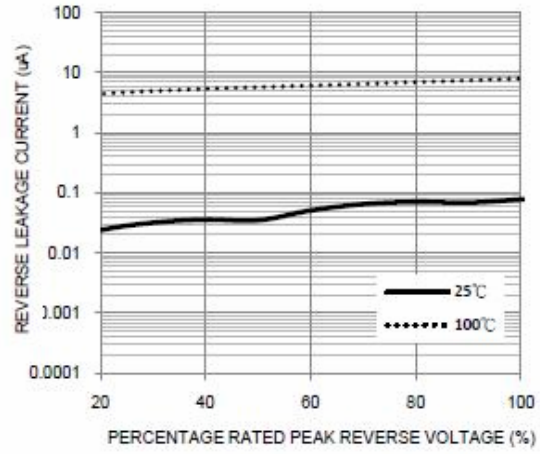


FIG. 5-TYPICAL JUNCTION CAPACITANCE