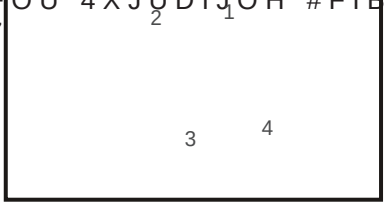
SiC SCHOTTKY DIODE TYPE

Preliminary

Features

t)JHI TVSHF DVSSFOU DBQBCJMJUZ
t ;FSP SFWFSTF SFDPWFSZ DVSSFOU
t)JHI CBOEXJEUI t*F@Tc<135°C
t *TPMBUJPO UZQF QBDLBHF

SOT-227

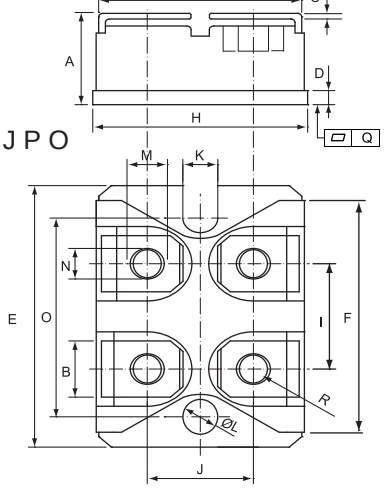


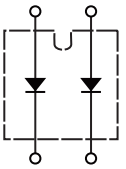
Benefits

t 6OJQPMBS SFDUJöFS
t ;FSP SFWFSTF SFDPWFSZ
t)JHIFS FóDJFODZ

Applications

t .PUPS ESJWFT
t 4XJUDI NPEF QPXFS TVQQMJFT
t &W DIBSHFST
t 4PMBS JOWFSUFST
t 8FMEJOH FRVJQNFOU





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Maximum Ratings

Operating Junction Temperature: -55℃ U+175℃

Storage Temperature: -55℃ U+175℃

Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum DC Blocking Voltage
CSRI2×140-065P1B	650V	650V

Maximum Rating	Symbol	Conditions	Value	Unit
Continuous forward current (per diode)	I_F	T_C=135 °C	140	A
Surge non-repetitive forward current sine halfwave (per diode)	I_{FSM}	T_C=25 °C, t_p=8.3 ms	1000	A
		T_C=150 °C, t_p=8.3 ms	700	A
Non-repetitive peak forward current (per diode)	$I_{F,max}$	T_C=25 °C, t_p=10 +s	4200	A
		T_C=150 °C, t_p=10 +s	2600	A
Repetitive peak reverse voltage	V_{RRM}	T_j=25 °C	650	V
Isolation voltage between all terminals and baseplate	V_{iso}	50/60 Hz, t=1min ISOL " P $	2500	V
Mounting torque		To heatsink	1.3	Nm
		To terminal	1.1	Nm

DIMENSIONS				
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.460	0.483	11.68	12.28
B	0.307	0.323	7.80	8.20
C	0.030	0.033	0.75	0.85
D	0.071	0.081	1.80	2.05
E	1.488	1.504	37.80	38.20
F	1.248	1.260	31.70	32.00
G	0.917	0.957	23.30	24.30
H	0.996	1.008	25.30	25.60
I	0.579	0.602	14.70	15.30
J	0.492	0.516	12.50	13.10
K	0.161	0.169	4.10	4.30
L	0.161	0.169	4.10	4.30
M	0.181	0.197	4.60	5.00
N	0.165	0.181	4.20	4.60
O	1.181	1.197	30.00	30.40
Q	-0.002	0.004	-0.05	0.10
R	M4*8			

Electrical Characteristics, at T_j=25 °C, unless otherwise specified. (per diode)

Static Characteristics	Symbol	Conditions	Values			Unit
			min.	typ.	max.	
DC blocking voltage	V_{DC}		650	-	-	V
Diode forward voltage	V_F	I_F =140A, T_j =25 °C	-	1.50	1.70	
		I_F =140A, T_j =175 °C	-	1.70	2.00	
Reverse current	I_R	V_R =650V, T_j =25 °C	-	80	150	μA
		V_R =650V, T_j =175 °C	-	150	500	

AC Characteristics (per diode)

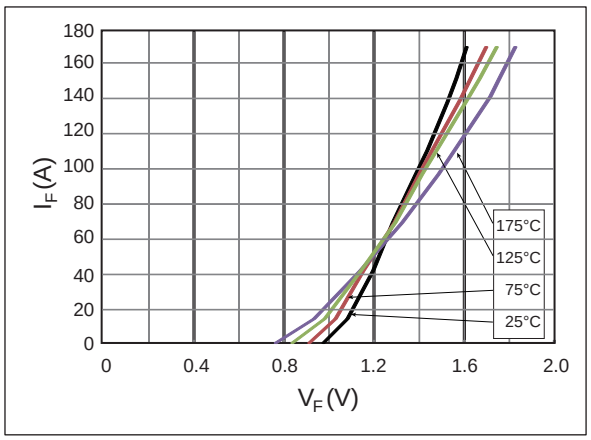
Static Characteristics	Symbol	Conditions	Values			Unit
			min.	typ.	max.	
Total capacitive charge	Q_{rr}	V_R=400V, T_j=25 °C	-	384	-	nC
Total capacitance	C	V_R=0V, f=1 MHz T_j=25 °C	-	6000	-	pF
		V_R=200V, f=100 KHz T_j=25 °C	-	684	-	
		V_R=400V, f=100 KHz T_j=25 °C	-	624	-	

Thermal Characteristics (per diode)

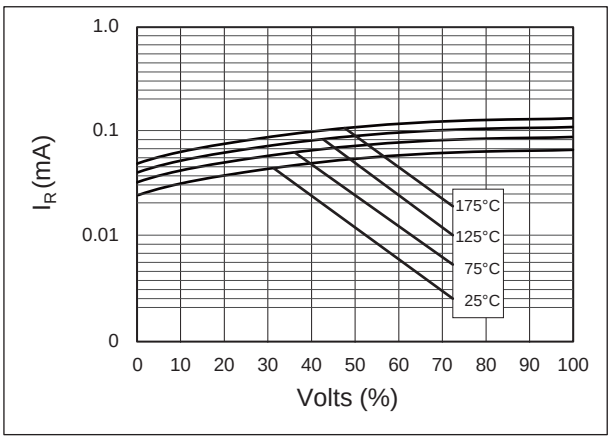
Static Characteristics	Symbol	Values	Unit
		typ.	
Thermal resistance from junction to case	$R_{\theta JC}$	0.10	°C/W

Typical Performance

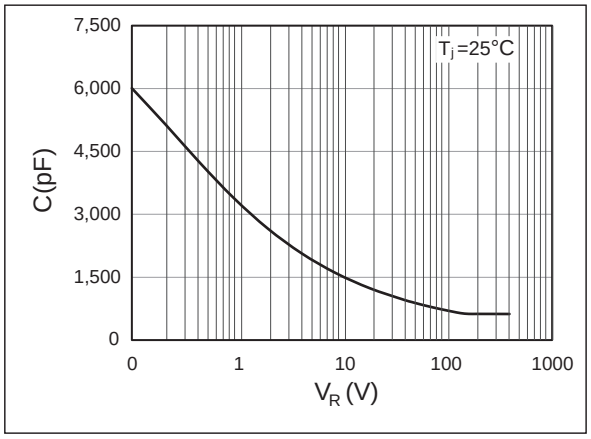
Forward Characteristics (parameterized on T_j)



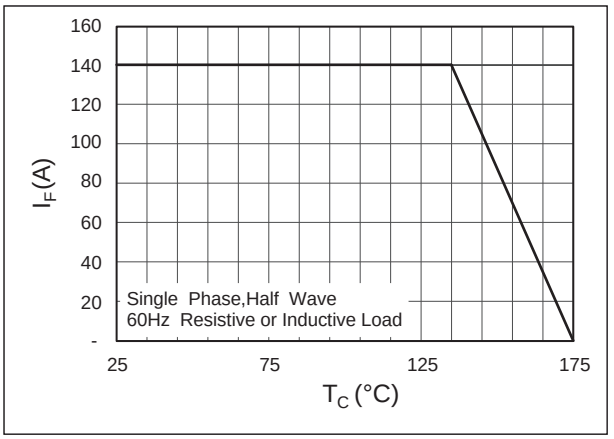
Reverse Characteristics (parameterized on Tj)



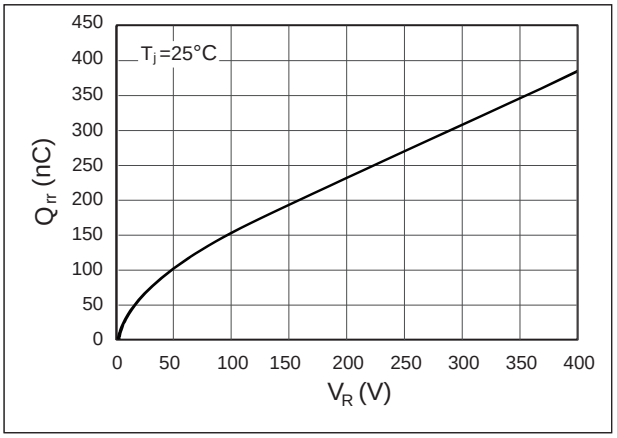
Capacitance



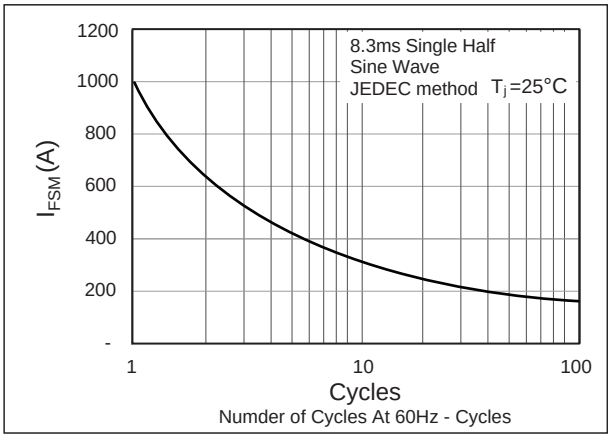
Current Derating



Recovery Charge



Forward Surge Current



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