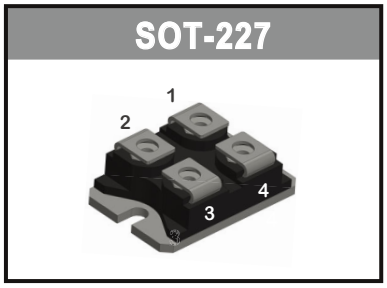
CSRI2×100-065P3B

SiC SCHOTTKY DIODE TYPE 2×100A

Features

- High surge current capable
- Zero reverse recovery current
- High bandwidth
- Isolation type package
- Temperature Independent Switching Behavior
- VDC 650 V
- I_F (T_C<135°C) 2×100 A

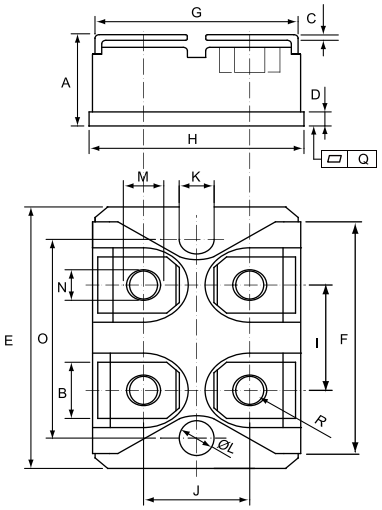


Benefits

- Unipolar rectifier
- Zero switching loss
- Higher efficiency
- Smaller heat sink
- Parallel devices without thermal runaway

Applications

- Motor drives
- Switch mode power supplies
- Ev chargers
- Solar inverters
- Welding equipment
- Power factor correction
- Diode snubber
- Automotive
- induction heating



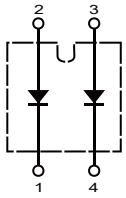
Maximum Ratings

Operating Junction Temperature : - 55 ℃ to +175 ℃

Storage Temperature : -55 ℃ to +175 ℃

Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum DC Blocking Voltage
CSRI2×100-065P3B	650V	650V

Maximum Rating	Symbol	Conditions	Value	Unit
Continuous forward current (per diode)	I_F	T_C=135 °C	100	A
Surge non-repetitive forward current sine halfwave (per diode)	I_{FSM}	T_C=25 °C, t_p=8.3 ms	800	
		T_C=150 °C, t_p=8.3 ms	500	
Non-repetitive peak forward current (per diode)	$I_{F,max}$	T_C=25 °C, t_p=10 μs	3200	
		T_C=150 °C, t_p=10 μs	2000	
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 I_{ISOL} ≤ 1mA	2500	V
Mounting torque		To heatsink	1.3	Nm
		To terminal	1.1	



parallel

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 =100A, T_j =25 °C	-	1.50	1.70	
		I_F =100A, T_j =175 °C	-	1.70	2.00	
Reverse current	I_R	V_R =650V, T_j =25 °C	-	60	100	μA
		V_R =650V, T_j =175 °C	-	100	500	

AC Characteristics (per diode)

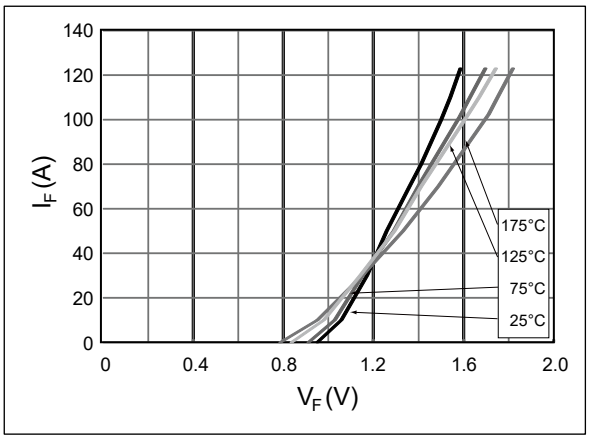
Static Characteristics	Symbol	Conditions	Values			Unit
			min.	typ.	max.	
Total capacitive charge	Q_{rr}	V_R=400V, T_j=25 °C	-	164	-	nC
Total capacitance	C	V_R=1V, f=1 MHz T_j=25 °C	-	4457	-	pF
		V_R=200V, f=1 MHz T_j=25 °C	-	476	-	
		V_R=400V, f=1 MHz T_j=25 °C	-	360	-	

Thermal Characteristics (per diode)

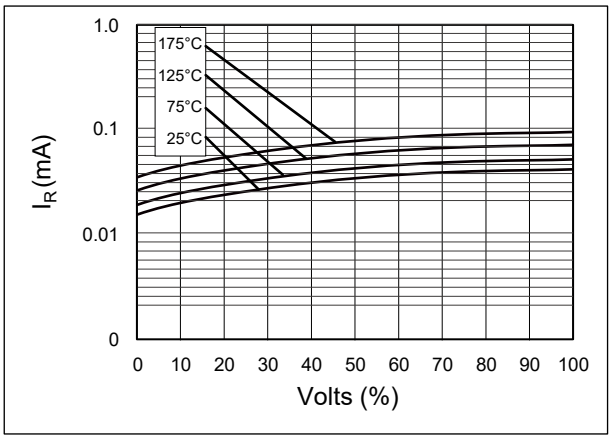
Static Characteristics	Symbol	Values	Unit
		typ.	
Thermal resistance from junction to case	$R_{\theta JC}$	0.14	°C/W

Typical Performance

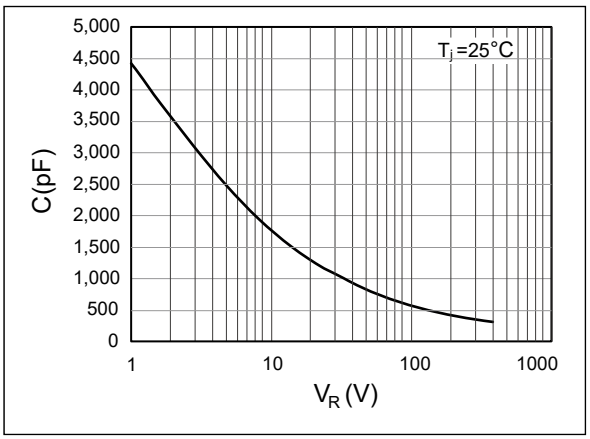
Forward Characteristics (parameterized on T_j)



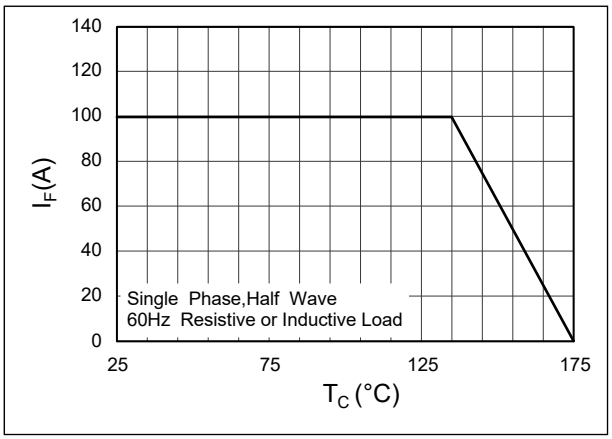
Reverse Characteristics (parameterized on Tj)



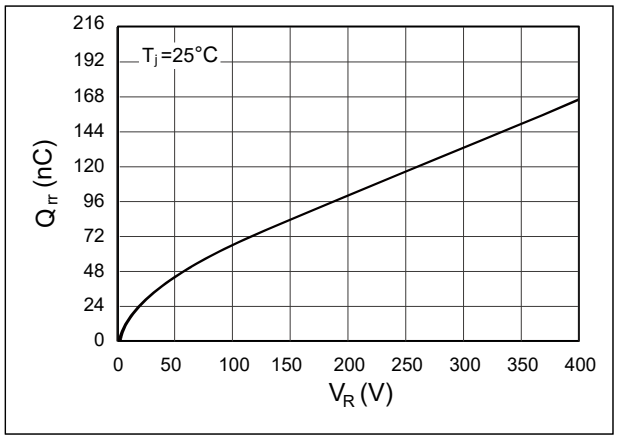
Capacitance



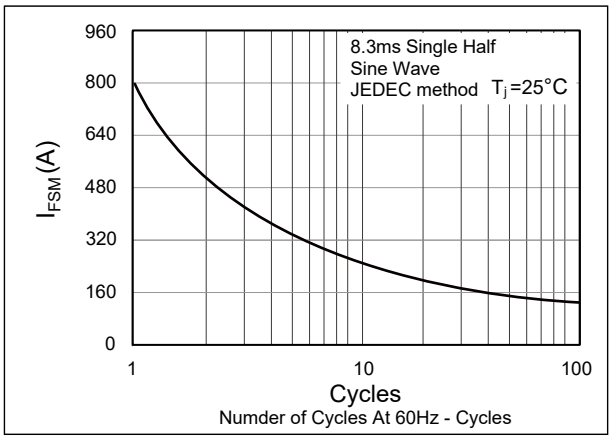
Current Derating



Recovery Charge



Forward Surge Current



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