

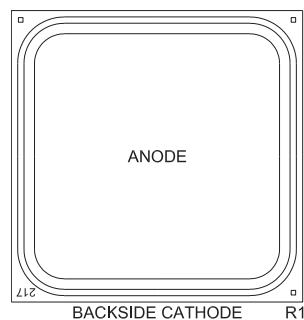
The CPC01 Silicon Carbide Schottky die is optimized for high temperature applications. Parametrically, the device is energy efficient as a result of low total conduction losses and minimal changes to switching characteristics as a function of temperature.

FEATURES:

- Positive temperature coefficient
- Low reverse leakage current
- Temperature independent switching characteristics
- High operating junction temperature
- Metalization suitable for standard die attach technologies
- Top metalization optimized for wire bonding

APPLICATIONS:

- Power inverters
- Industrial motor drives
- Switch-mode power supplies
- Power factor correction
- Over-current protection



MECHANICAL SPECIFICATIONS:

Die Size	98 x 98 MILS
Die Thickness	13.8 MILS ± 0.8 MILS
Die Passivation	SIN / SiO2 / PI
Anode Bonding Pad Area	75 x 75 MILS
Top Side Metalization	Al – 40,000Å
Back Side Metalization	Ti/W/Au – 200Å/1,000Å/1,000Å
Wafer Diameter	4 INCHES
Gross Die Per Wafer	1,100

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL		UNITS
Peak Repetitive Reverse Voltage	V _{RRM}	1200	V
DC Blocking Voltage	V _R	1200	V
Continuous Forward Current	I _F	10	A
Peak Forward Surge Current (tp=8.3ms)	I _{FSM}	50	A
Operating and Storage Junction Temperature	T _J , T _{stg}	-55 to +225	°C

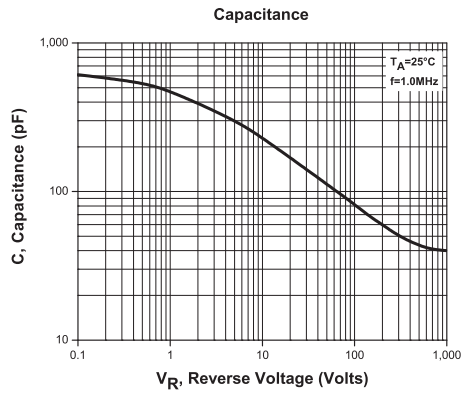
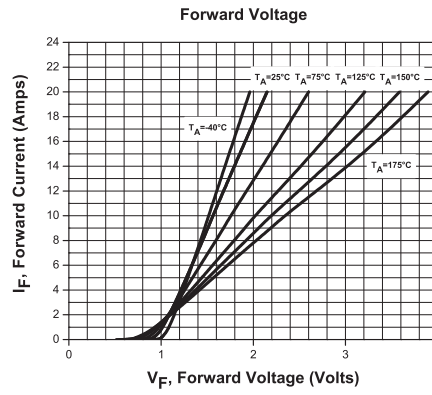
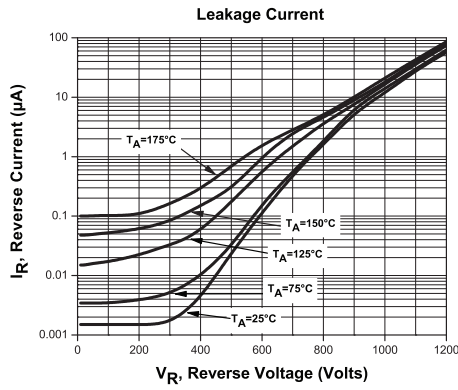
ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
I _R	V _R =1200V	60	400	µA
I _R	V _R =1200V, T _J =175°C	0.09	1.0	mA
V _F	I _F =10A	1.55	1.8	V
V _F	I _F =10A, T _J =175°C	2.3	3.0	V
Q _C	V _R =800V, I _F =10A, di/dt=750A/µs	54		nC
C _J	V _R =1.0V, f=1.0MHz	477		pF
C _J	V _R =300V, f=1.0MHz	50		pF
C _J	V _R =600V, f=1.0MHz	41		pF

R0 (20-March 2013)

CPC01

Typical Electrical Characteristics



R0 (20-March 2013)