

## **Features**

- · Zero Reverse Recovery Current
- · Positive Temperature Coefficient
- High-Speed Switching
- · Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)

## **Benefits**

- · Temperature-Independent Performance
- · Low Switching Loss
- · Low Heat Dissipation Requirements

# **Applications**

- Switching Power Supply
- · Power Factor Correction
- · Motor Drive, Traction
- Charging Pile

# **Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Thermal Resistance: 1.0°C/W Junction to Case

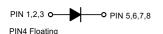
MCC Part Number	Device Marking
SICAC1060P	SICAC1060P

Peak Repetitive Reverse Voltage	$V_{RRM}$	650V	
Surge Peak Reverse Voltage	$V_{RSM}$	650V	
DC Reverse Voltage	$V_{DC}$	650V	
Average Forward Current	I <sub>F</sub>	10A	T <sub>J</sub> =155°C
Peak Forward Surge Current	I <sub>FSM</sub>	49A	T <sub>C</sub> =25°C, t <sub>p</sub> =10ms, Half Sine Pulse
Power Dissipation	$P_D$	150W	T <sub>C</sub> =25°C

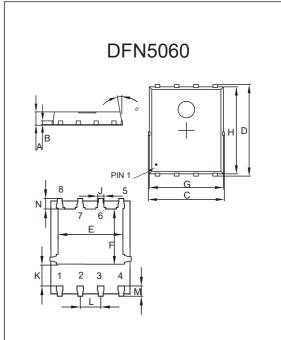
Note:1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

#### **Internal Structure:**



# 10Amp Silicon Carbide Schottky Barrier Rectifier 650 Volts



	DIMENSIONS					
DIM	INCHES		MM		NOTE	
Dilvi	MIN	MAX	MIN	MAX	NOTE	
Α	0.031	0.047	0.80	1.20		
В	0.0	010	0.2	254	TYP.	
С	0.193	0.222	4.90	5.64		
D	0.232	0.250	5.90	6.35		
E	0.148	0.167	3.75	4.25		
F	0.126	0.154	3.20	3.92		
G	0.189	0.213	4.80	5.40		
Н	0.222	0.239	5.65	6.06		
K	0.045	0.059	1.15	1.50		
J	0.012	0.020	0.30	0.50		
L	0.046	0.054	1.17	1.37		
М	0.012	0.028	0.30	0.71		
N	0.016	0.028	0.40	0.71		

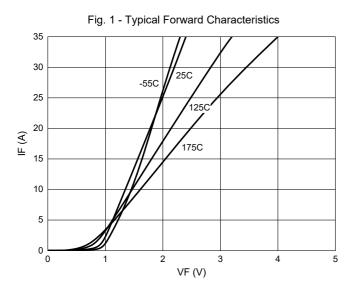


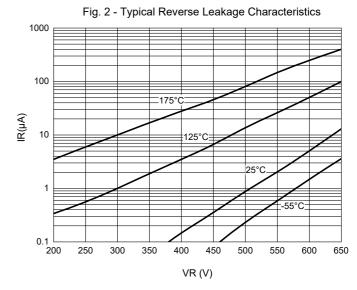
# Electrical Characteristics @ 25°C (Unless Otherwise Specified)

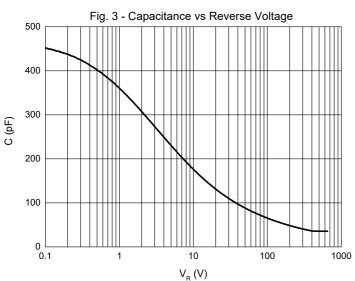
Parameter	Symbol	Conditions	Тур.	Max.	Units
Forward Voltage V <sub>F</sub>	M	I <sub>F</sub> =10A, T <sub>J</sub> =25°C	1.39	1.6	V
	I <sub>F</sub> =10A, T <sub>J</sub> =175°C	1.65		V	
Reverse Leakage Current I <sub>R</sub>	1	V <sub>R</sub> =650V, T <sub>J</sub> =25°C	12.8	44	μA
	V <sub>R</sub> =650V, T <sub>J</sub> =175°C	424		μA	
Total Capacitive Charge	Q <sub>C</sub>	V <sub>R</sub> =400V	24.8		nC
		V <sub>R</sub> =0V, f=1MHz	452		pF
Total capacitance C	С	V <sub>R</sub> =200V, f=1MHz	48		pF
		V <sub>R</sub> =400V, f=1MHz	36		pF
Capacitance Stored Energy	Ec	V <sub>R</sub> =400V	2.92		μJ

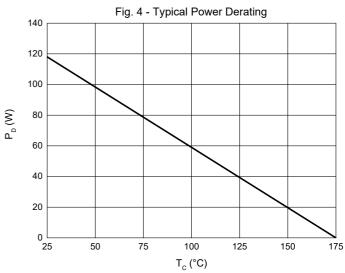


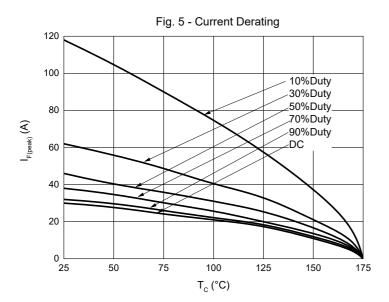
## **Curve Characteristics**













# **Ordering Information**

Device	Packing
SICAC1060P-TP	Tape&Reel:5Kpcs/Reel

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