



# SiC10A065T-AU

## SILICON CARBIDE SCHOTTKY DIODE

**Voltage** 650 V **Current** 10 A

### Features

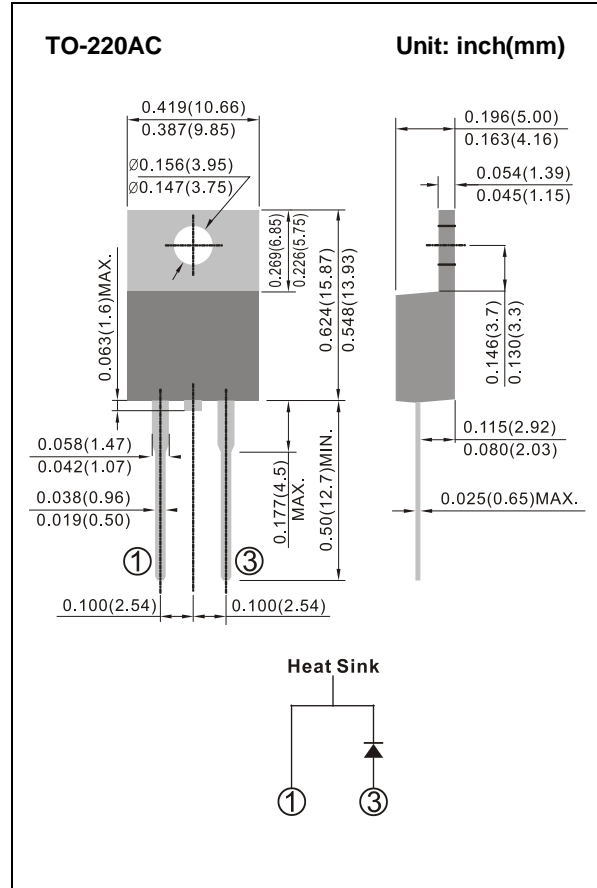
- Temperature Independent Switching Behavior
- Low Conduction and Switching Loss
- High Surge Current Capability
- Positive Temperature Coefficient on  $V_F$
- Fast Reverse Recovery
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified

### Mechanical Data

- Case: Molded plastic, TO-220AC
- Marking: 10A065T

### Benefits

- High Frequency Operation
- Higher System Efficiency
- Environmental Protection
- Parallel Device Convenience
- Hard Switching & High Reliability
- High Temperature Application



### Maximum Ratings

PARAMETER	SYMBOL	TEST CONDITIONS	VALUE	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	$T_J=25^\circ\text{C}$	650	V
Maximum RMS Voltage	$V_{RSM}$	$T_J=25^\circ\text{C}$	650	V
Maximum DC Blocking Voltage	$V_R$	$T_J=25^\circ\text{C}$	650	V
Continuous Forward Current	$I_{F(AV)}$	$T_C=25^\circ\text{C}$	25	A
		$T_C=125^\circ\text{C}$	14	A
		$T_C=150^\circ\text{C}$	10	A
Repetitive Peak Forward Surge Current ( $T_P=10\text{ms}$ , Half Sine Wave, $D=0.1$ )	$I_{FRM}$	$T_C=25^\circ\text{C}$	59	A
		$T_C=125^\circ\text{C}$	50	A



## SiC10A065T-AU

### Maximum Ratings

PARAMETER	SYMBOL	TEST CONDITIONS	VALUE	UNITS
Non-Repetitive Peak Forward Surge Current ( $T_P=10\text{mS}$ , Half Sine Wave)	$I_{FSM}$	$T_C=25^\circ\text{C}$	69	A
		$T_C=125^\circ\text{C}$	63	A
Non-Repetitive Peak Forward Surge Current ( $T_P=10\mu\text{S}$ , Pulse)		$T_C=25^\circ\text{C}$	400	A
Power Dissipation	$P_D$	$T_C=25^\circ\text{C}$	115	W
		$T_C=125^\circ\text{C}$	38	W
Operating Junction Temperature	$T_J$		175	$^\circ\text{C}$
Storage Temperature	$T_{STG}$		-55 to 175	$^\circ\text{C}$
Thermal Resistance Junction to Case	$R_{\theta JC}$		1.3	$^\circ\text{C/W}$

### Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
DC Blanking Voltage	$V_{DC}$	$I_R=100\mu\text{A}$ , $T_J=25^\circ\text{C}$	650	770	-	V
Forward Voltage	$V_F$	$I_F=10\text{A}$ , $T_J=25^\circ\text{C}$	-	1.5	1.8	V
		$I_F=10\text{A}$ , $T_J=175^\circ\text{C}$	-	1.9	2.2	V
Reverse Current	$I_R$	$V_R=650\text{V}$ , $T_J=25^\circ\text{C}$	-	5	70	$\mu\text{A}$
		$V_R=650\text{V}$ , $T_J=175^\circ\text{C}$	-	20	190	$\mu\text{A}$
Total Capacitive Charge	$Q_C$	$I_F=10\text{A}$ , $di/dt=300\text{A}/\mu\text{S}$ , $V_R=400\text{V}$ , $T_J=25^\circ\text{C}$	-	18	-	nC
Total Capacitance	C	$V_R=1\text{V}$ , $T_J=25^\circ\text{C}$ , $f=1\text{MHz}$	-	390	-	pF
		$V_R=200\text{V}$ , $T_J=25^\circ\text{C}$ , $f=1\text{MHz}$	-	55	-	pF
		$V_R=400\text{V}$ , $T_J=25^\circ\text{C}$ , $f=1\text{MHz}$	-	54	-	pF



# SiC10A065T-AU

## TYPICAL CHARACTERISTIC CURVES

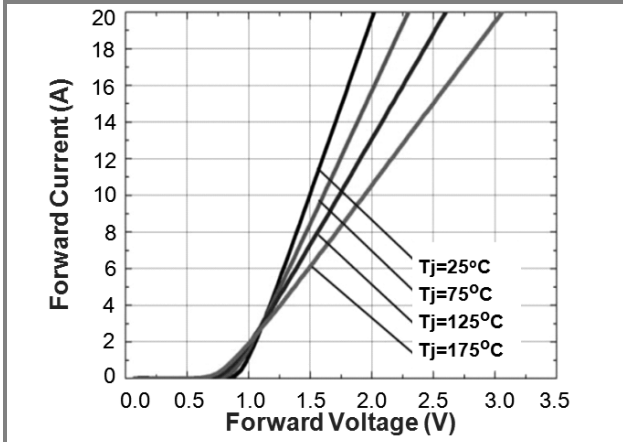


Fig.1 Forward Characteristics

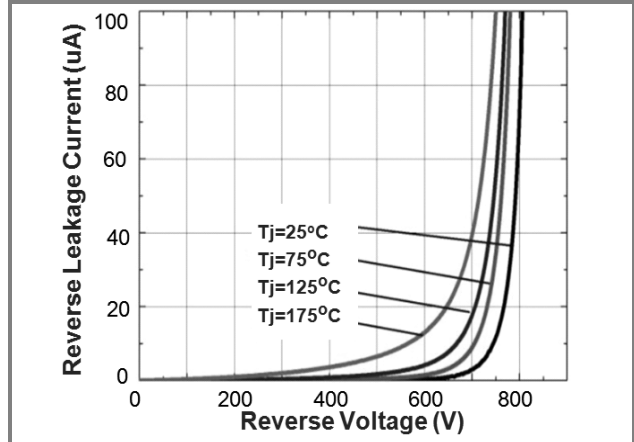


Fig.2 Reverse Characteristics

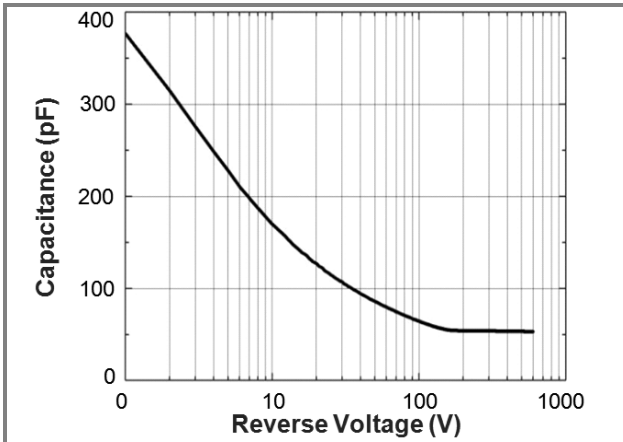


Fig.3 Capacitance vs. Reverse Voltage

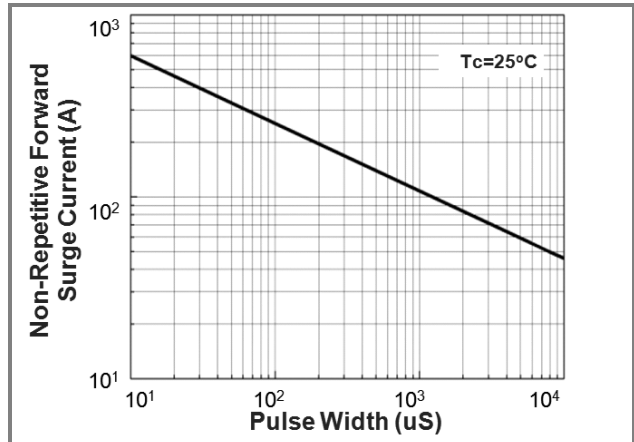


Fig.4 Non-Repetitive Peak Forward Surge Current (Pulse Mode)

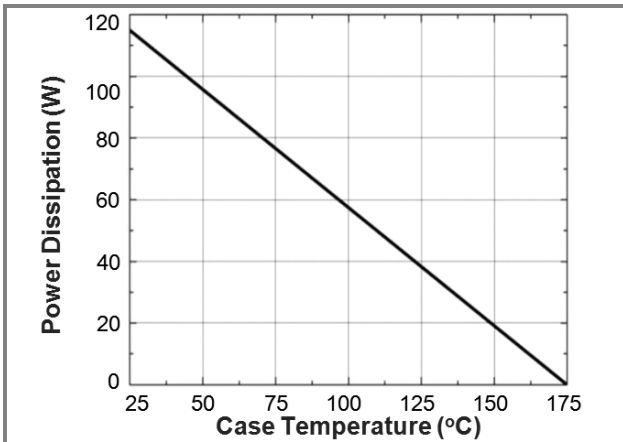


Fig.5 Power Derating

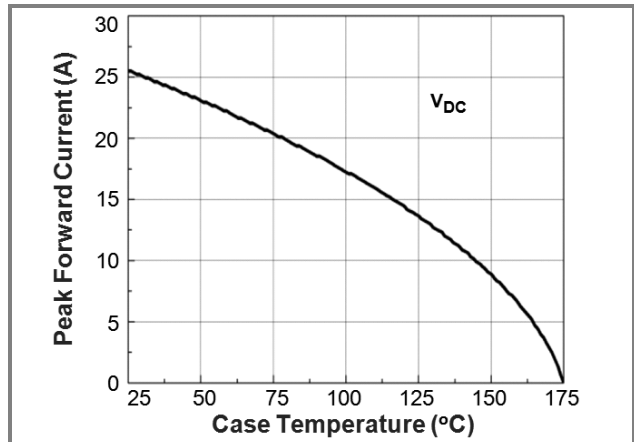


Fig.6 Current Derating



# SiC10A065T-AU

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SIC10A065T-AU_T0_000A1	TO-220AC	50pcs / Tube	10A065T	Halogen free



## SiC10A065T-AU

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

单击下面可查看定价，库存，交付和生命周期等信息

[>>Panjit\(强茂\)](#)