

isc N-Channel SiC SMOSFET Transistor

SCT3060

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 78\text{m}\Omega$
- Fast switching speed
- Fast reverse recovery
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

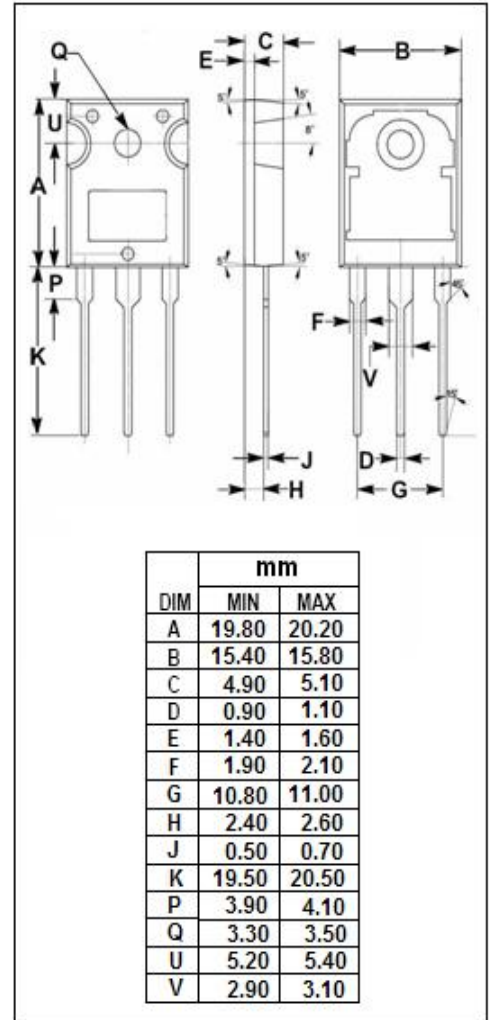
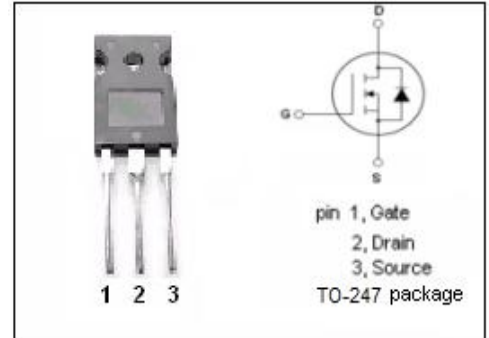
- DC/DC converters
- Switch mode power supplies

• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	650	V
V_{GS}	Gate-Source Voltage	-4~22	V
I_D	Drain Current-Continuous	39	A
I_{DM}	Drain Current-Single Pulsed	97	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	165	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	0.75	$^\circ\text{C/W}$



isc N-Channel SiC MOSFET Transistor**SCT3060****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	650			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10V; I_D=6.67mA$	2.7		5.6	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=18V; I_D=13A$			78	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=22V; V_{DS}=0V$			100	nA
		$V_{GS}=-4V; V_{DS}=0V$			-100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=650V; V_{GS}=0V$			10	μA
V_{SD}	Diode forward voltage	$I_S=13A, V_{GS}=0V$		3.2		V

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