

# Isc N-Channel MOSFET Transistor

# IPA65R280C6

### • FEATURES

- With TO-220F Package
- Drain Source Voltage  
:  $V_{DSS}=650V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 0.28 \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • APPLICATIONS

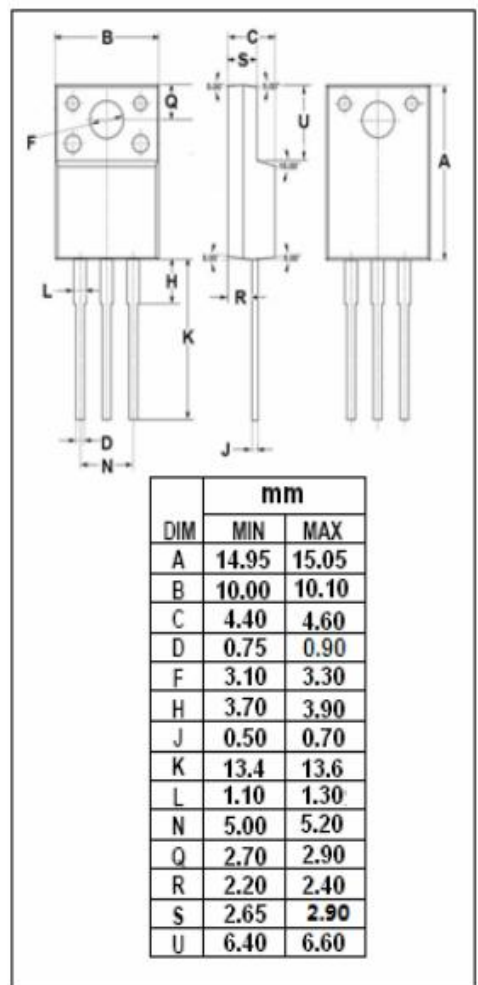
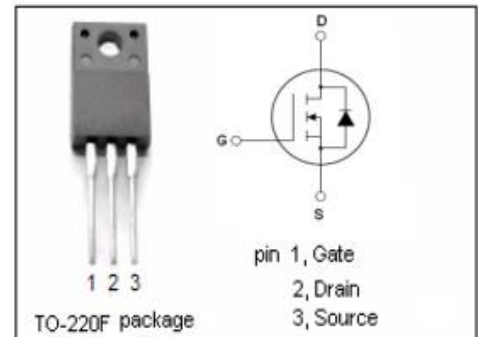
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	650	V
$V_{GSS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous @ $T_c=25^\circ\text{C}$ ( $V_{GS}$ at 10V) $T_c=100^\circ\text{C}$	13.8 8.7	A
$I_{DM}$	Drain Current-Single Pulsed	39	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	32	W
$T_j$	Max. Operating Junction Temperature	-55~150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.9	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	80	$^\circ\text{C/W}$



**Isc N-Channel MOSFET Transistor****IPA65R280C6****• ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	650			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.44mA$	2.5	3	3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=4.4A$		0.25	0.28	$\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 100$	nA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=650V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=650V; V_{GS}=0V; T_j=150^{\circ}\text{C}$		10	1	$\mu\text{A}$
$V_{SDF}$	Diode forward voltage	$I_{SD}=6.6A, V_{GS}=0V$		0.9		V

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