

# isc N-Channel MOSFET Transistor

## IRF3704ZCS

### • FEATURES

- With TO-263( D2PAK ) packaging
- High speed switching
- Low gate input resistance
- Standard level gate drive
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • APPLICATIONS

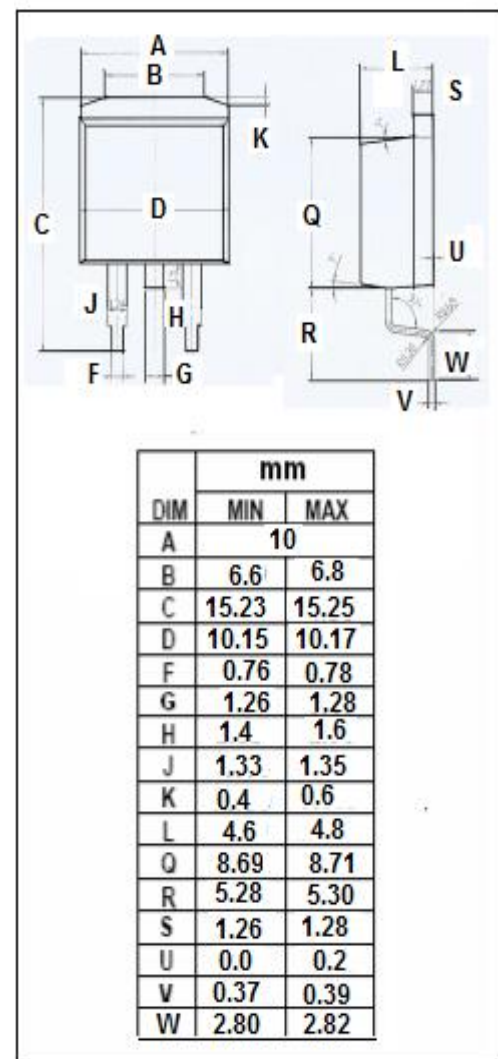
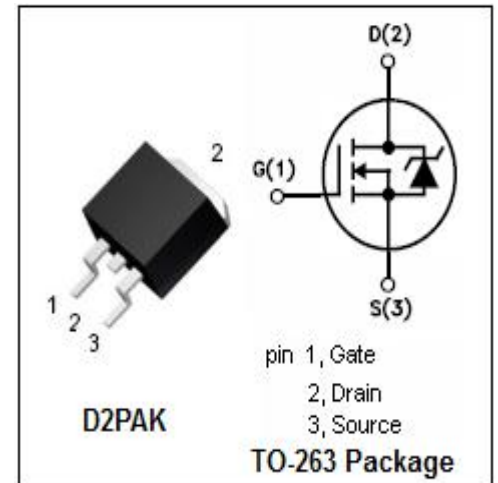
- Power supply
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	20	V
$V_{GS}$	Gate-Source Voltage	$\pm 16$	V
$I_D$	Drain Current-Continuous; $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	67 47	A
$I_{DM}$	Drain Current-Single Pulsed	260	A
$P_D$	Total Dissipation	57	W
$T_j$	Operating Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^{\circ}\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	2.65	$^{\circ}\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	40	$^{\circ}\text{C/W}$



**isc N-Channel MOSFET Transistor****IRF3704ZCS****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V$ ; $I_D=0.25mA$	20			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$ ; $I_D=0.25mA$	1.65		2.55	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$ ; $I_D=21A$		6.3	7.9	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 16V$ ; $V_{DS}=0V$			$\pm 0.1$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=16V$ ; $V_{GS}=0V$ ; $T_c=25^{\circ}\text{C}$ $V_{DS}=16V$ ; $V_{GS}=0V$ ; $T_c=125^{\circ}\text{C}$			1 150	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=17A$ , $V_{GS}=0V$			1.0	V

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