

isc N-Channel MOSFET Transistor

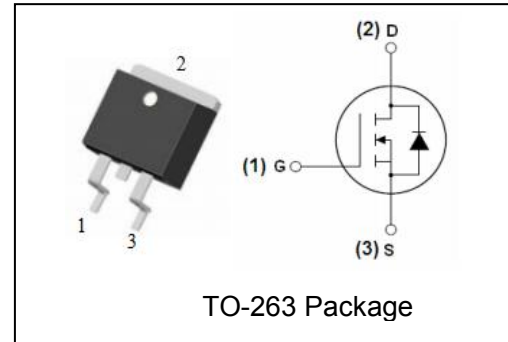
R6024KNJ

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 0.165 \Omega$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

- Switching Voltage Regulators

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	24	A
I_{DM}	Drain Current-Single Pulsed	72	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	245	W
T_j T_{stg}	Operating Junction And Storage Temperature	-55~150	$^\circ\text{C}$

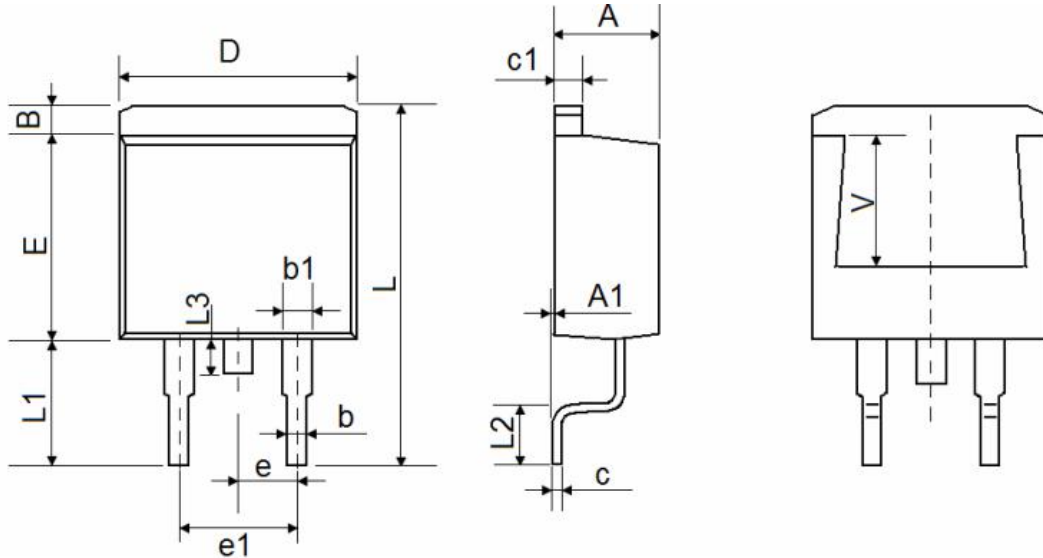
• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	0.51	$^\circ\text{C/W}$

• ELECTRICAL CHARACTERISTICS

 $T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0\text{V}; I_D=1\text{mA}$	600		V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.36\text{mA}$	3	5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=11.3\text{A}$		0.165	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20\text{V}$		± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=600\text{V}; V_{GS}=0\text{V}$		100	μA
V_{SD}	Diode forward voltage	$I_S=24\text{A}, V_{GS}=0\text{V}$		1.5	V

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TO-263 Package Outline


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.470	4.670	0.176	0.184
A1	0.000	0.150	0.000	0.006
B	1.170	1.370	0.046	0.054
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
e	2.540 TYP.		0.100 TYP.	
e1	4.980	5.180	0.196	0.204
L	15.050	15.450	0.593	0.608
L1	5.080	5.480	0.200	0.216
L2	2.340	2.740	0.092	0.108
L3	1.300	1.700	0.051	0.067
V	5.600 REF		0.220 REF	

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