International
IOR Rectifier

Preliminary Data Sheet

Repetitive Avalanche and dv/dt Rated MOSFET Transistor P-Channel

2N7524

60 Volt, 0.015 Ω, RAD Hard MOSFET

R5

Package: SMD-2

Product Summary

Hex Size	Technology	BV_{DSS}	$R_{DS\,(on)}$	I_D
6	RAD Hard	-60V	0.015 Ω	-75*A

Absolute Maximum Ratings

	Parameter	Value	Units
I_D @ V_{GS} = -12V, T_C = 25°C	Continuous Drain Current	-75*	A
I_D @ V_{GS} = -12V, T_C = 100°C	Continuous Drain Current	-58	A
P_D @ T_C = 25°C	Power Dissipation	300	W
V_{GS}	Gate-to-Source Voltage	±20	V
E_{AS}	Single Pulse Avalanche Energy	500	mJ
I_{AR}	Avalanche Current	-75	A
E_{AR}	Repetitive Avalanche Energy	30	mJ
T_J	Operating Junction Range	-55 to 150	°C

Pre-Irradiation
Electrical Characteristics @ T_J = 25° C (Unless Otherwise Specified)

	Parameter	Min	Typ.	Max	Units	Test Conditions
BV_{DSS}	Drain-to-Source Breakdown Voltage	-60	-	-	V	V_{GS}=0V, I_D=-1.0mA
$R_{DS(on)}$	Static Drain-to-Source On-State Resistance	-	-	0.015	Ω	V_{GS}=-12V, I_D=-58A
$V_{GS\,(th)}$	Gate Threshold Voltage	-2.0	-	-4.0	V	V_{DS}=V_{GS}, I_D=-1.0mA
I_{DSS}	Zero Gate Voltage Drain Current	-	-	-10	µA	V_{DS}= -48V, V_{GS}=0V
I_{DSS}	Zero Gate Voltage Drain Current	-	-	-25	µA	V_{DS} =-48V, T_J=125°C
I_{GSS}	Gate-to-Source Leakage Forward	-	-	-100	nA	V_{GS}=-20V
I_{GSS}	Gate-to-Source Leakage Reverse	-	-	100	nA	V_{GS}=20V
Qg	Total Gate Charge	-	-	140	nC	V_{GS}=-12V, I_D=-45A

Thermal Resistance

Parameter	Min	Typ.	Max	Units	Test Conditions
R_{thJC} Junction-to-Case	-	-	0.42	°C/W	

*Current is limited by internal wire size

01/23/01