Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

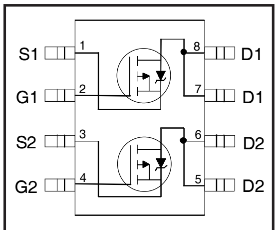
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

International Rectifier

IRF7342QPbF

- Advanced Process Technology
- Ultra Low On-Resistance
- Dual P Channel MOSFET
- Surface Mount
- Available in Tape & Reel
- 150°C Operating Temperature
- Lead-Free

HEXFET® Power MOSFET



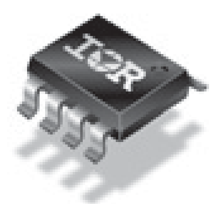
Top View

V_{DSS} = -55V

$R_{DS(on)}$ = 0.105Ω

Description

These HEXFET® Power MOSFET's in a Dual SO-8 package utilize the lastest processing techniques to achieve extremely low on-resistance per silicon area. Additional features of these HEXFET Power MOSFET's are a 150°C junction operating temperature, fast switching speed and improved repetitive avalanche rating. These benefits combine to make this design an extremely efficient and reliable device for use in a wide variety of other applications.
The efficient SO-8 package provides enhanced thermal characteristics and dual MOSFET die capability making it ideal in a variety of power applications. This dual, surface mount SO-8 can dramatically reduce board space and is also available in Tape & Reel.


SO-8

Base Part Number	Package Type	Standard Pack		Orderable Part Number	EOL Notice
		Form	Quantity		
~~IRF7342QPbF~~	~~SO-8~~	~~Tube/Bulk~~	~~95~~	~~IRF7342QPbF~~	EOL 529
IRF7342QPbF	SO-8	Tape and Reel	4000	IRF7342QTRPbF	

Absolute Maximum Ratings

	Parameter	Max.	Units
V_{DS}	Drain- Source Voltage	-55	V
I_D @ T_C = 25°C	Continuous Drain Current, V_{GS} @ 10V	-3.4	A
I_D @ T_C = 70°C	Continuous Drain Current, V_{GS} @ 10V	-2.7	
I_{DM}	Pulsed Drain Current ①	-27	
P_D @T_C = 25°C	Power Dissipation	2.0	W
P_D @T_C = 70°C	Power Dissipation	1.3	
	Linear Derating Factor	0.016	W/°C
V_{GS}	Gate-to-Source Voltage	± 20	V
V_{GSM}	Gate-to-Source Voltage Single Pulse tp<10µs	30	V
E_{AS}	Single Pulse Avalanche Energy②	114	
dv/dt	Peak Diode Recovery dv/dt ③	5.0	V/ns
T_J, T_{STG}	Junction and Storage Temperature Range	-55 to + 150	°C

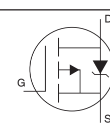
Thermal Resistance

	Parameter	Typ.	Max.	Units
$R_{θJA}$	Maximum Junction-to-Ambient⑤	–––	62.5	°C/W

Electrical Characteristics @ $T_J = 25°C$ (unless otherwise specified)

	Parameter	Min.	Typ.	Max.	Units	Conditions
$V_{(BR)DSS}$	Drain-to-Source Breakdown Voltage	-55	——	——	V	$V_{GS} = 0V$, $I_D = -250\mu A$
$\Delta V_{(BR)DSS}/\Delta T_J$	Breakdown Voltage Temp. Coefficient	——	-0.054	——	V/°C	Reference to 25°C, $I_D = -1mA$
$R_{DS(on)}$	Static Drain-to-Source On-Resistance	——	0.095	0.105	Ω	$V_{GS} = -10V$, $I_D = -3.4A$ ④
		——	0.150	0.170		$V_{GS} = -4.5V$, $I_D = -2.7A$ ④
$V_{GS(th)}$	Gate Threshold Voltage	-1.0	——	——	V	$V_{DS} = V_{GS}$, $I_D = -250\mu A$
g_{fs}	Forward Transconductance	3.3	——	——	S	$V_{DS} = -10V$, $I_D = -3.1A$
I_{DSS}	Drain-to-Source Leakage Current	——	——	-2.0	µA	$V_{DS} = -55V$, $V_{GS} = 0V$
		——	——	-25		$V_{DS} = -55V$, $V_{GS} = 0V$, $T_J = 55°C$
I_{GSS}	Gate-to-Source Forward Leakage	——	——	-100	nA	$V_{GS} = -20V$
	Gate-to-Source Reverse Leakage	——	——	100		$V_{GS} = 20V$
Q_g	Total Gate Charge	——	26	38	nC	$I_D = -3.1A$
Q_{gs}	Gate-to-Source Charge	——	3.0	4.5		$V_{DS} = -44V$
Q_{gd}	Gate-to-Drain ("Miller") Charge	——	8.4	13		$V_{GS} = -10V$, See Fig. 10 ④
$t_{d(on)}$	Turn-On Delay Time	——	14	22	ns	$V_{DD} = -28V$
t_r	Rise Time	——	10	15		$I_D = -1.0A$
$t_{d(off)}$	Turn-Off Delay Time	——	43	64		$R_G = 6.0\Omega$
t_f	Fall Time	——	22	32		$R_D = 16\Omega$, ④
C_{iss}	Input Capacitance	——	690	——	pF	$V_{GS} = 0V$
C_{oss}	Output Capacitance	——	210	——		$V_{DS} = -25V$
C_{rss}	Reverse Transfer Capacitance	——	86	——		$f = 1.0MHz$, See Fig. 9

Source-Drain Ratings and Characteristics

	Parameter	Min.	Typ.	Max.	Units	Conditions
I_S	Continuous Source Current (Body Diode)	——	——	-2.0	A	MOSFET symbol showing the integral reverse p-n junction diode. 
I_{SM}	Pulsed Source Current (Body Diode) ①	——	——	-27		
V_{SD}	Diode Forward Voltage	——	——	-1.2	V	$T_J = 25°C$, $I_S = -2.0A$, $V_{GS} = 0V$ ③
t_{rr}	Reverse Recovery Time	——	54	80	ns	$T_J = 25°C$, $I_F = -2.0A$
Q_{rr}	Reverse RecoveryCharge	——	85	130	nC	di/dt = -100A/µs ③

Notes:

① Repetitive rating; pulse width limited by max. junction temperature. (See fig. 11)

② Starting $T_J = 25°C$, L = 20mH $R_G = 25\Omega$, $I_{AS} = -3.4A$. (See Figure 8)

③ $I_{SD} \leq -3.4A$, di/dt $\leq$ -150A/µs, $V_{DD} \leq V_{(BR)DSS}$, $T_J \leq 150°C$

④ Pulse width $\leq$ 300µs; duty cycle $\leq$ 2%.

⑤ When mounted on 1 inch square copper board, t<10 sec

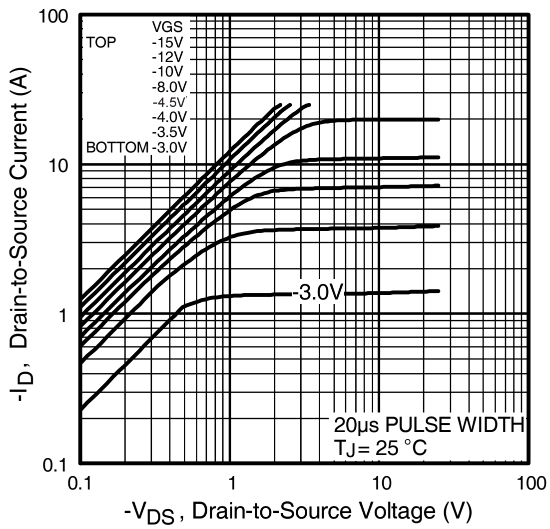


Fig 1. Typical Output Characteristics

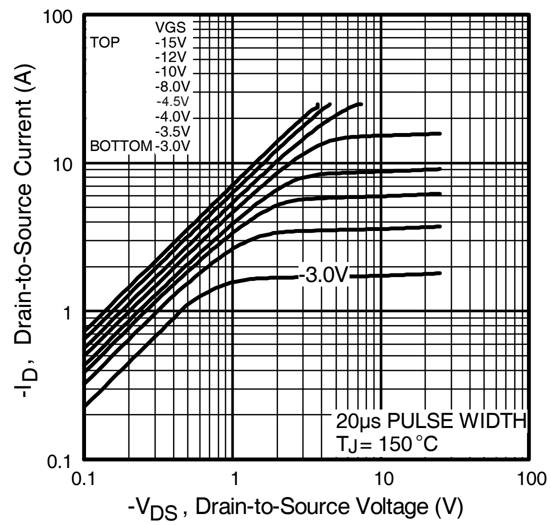


Fig 2. Typical Output Characteristics

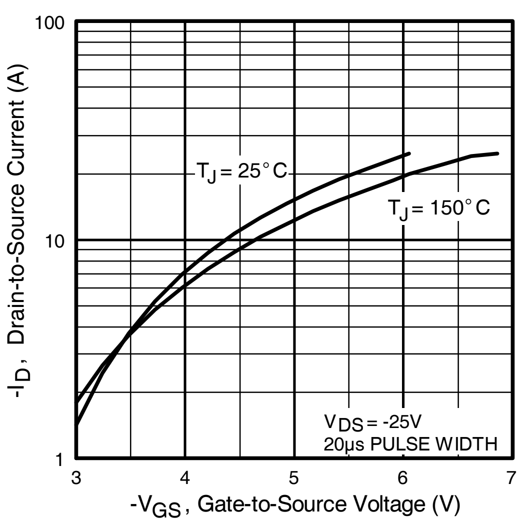


Fig 3. Typical Transfer Characteristics

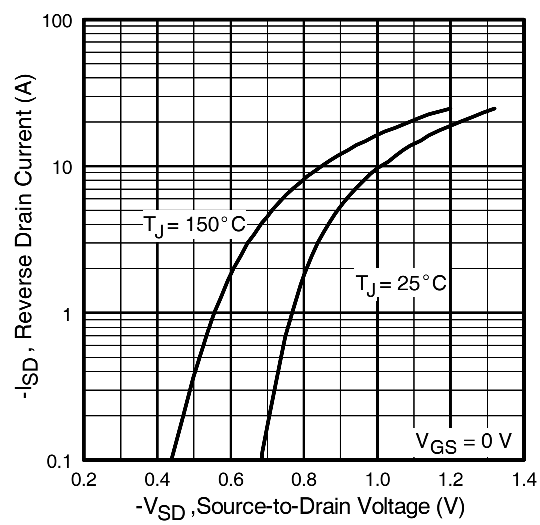


Fig 4. Typical Source-Drain Diode Forward Voltage

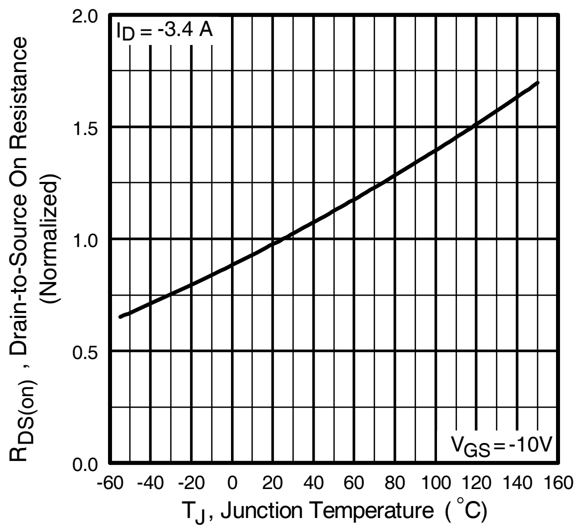


Fig 5. Normalized On-Resistance Vs. Temperature

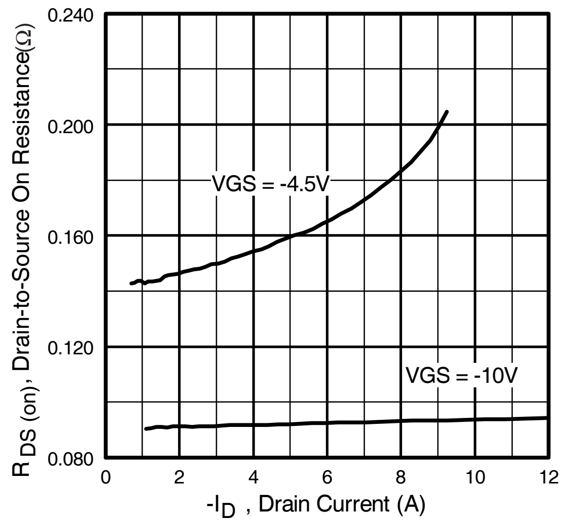


Fig 6. Typical On-Resistance Vs. Drain Current

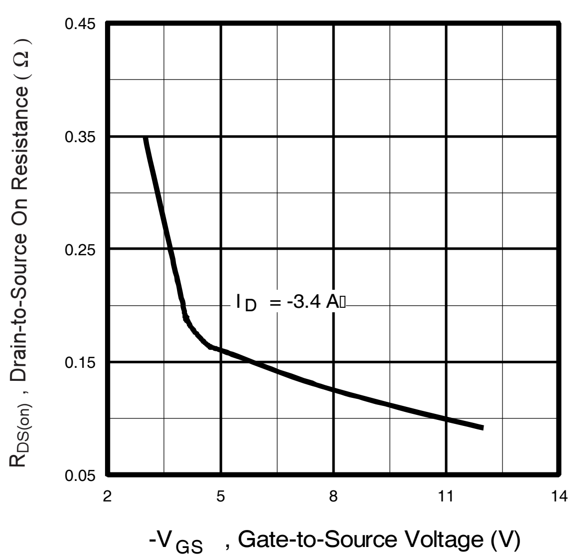


Fig 7. Typical On-Resistance Vs. Gate Voltage

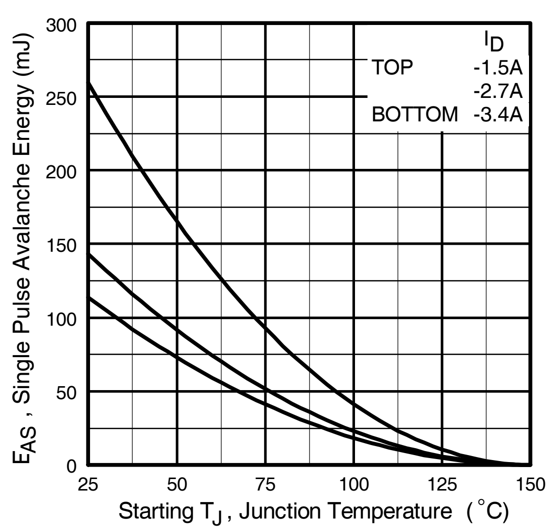


Fig 8. Maximum Avalanche Energy Vs. Drain Current

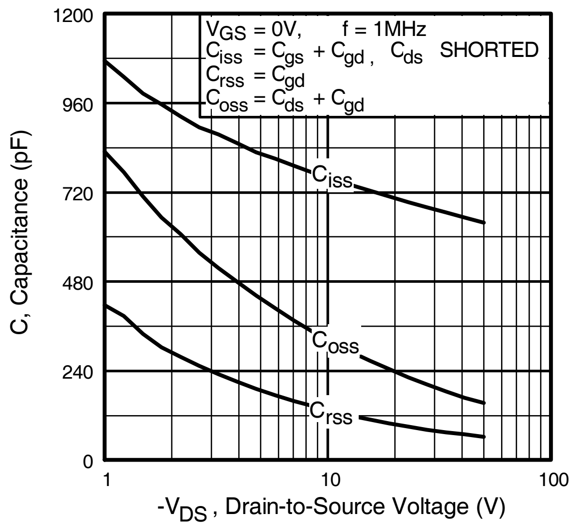


Fig 9. Typical Capacitance Vs. Drain-to-Source Voltage

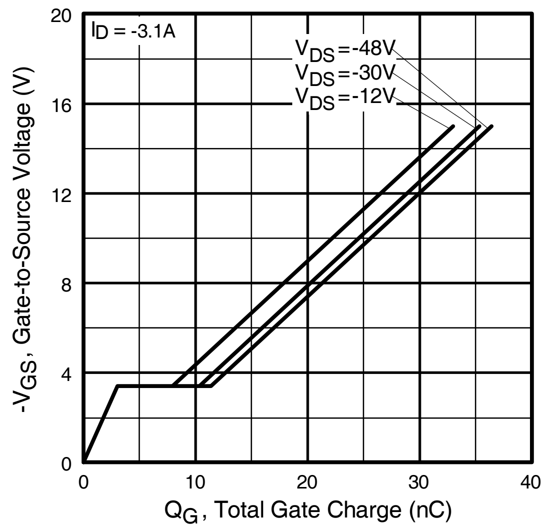


Fig 10. Typical Gate Charge Vs. Gate-to-Source Voltage

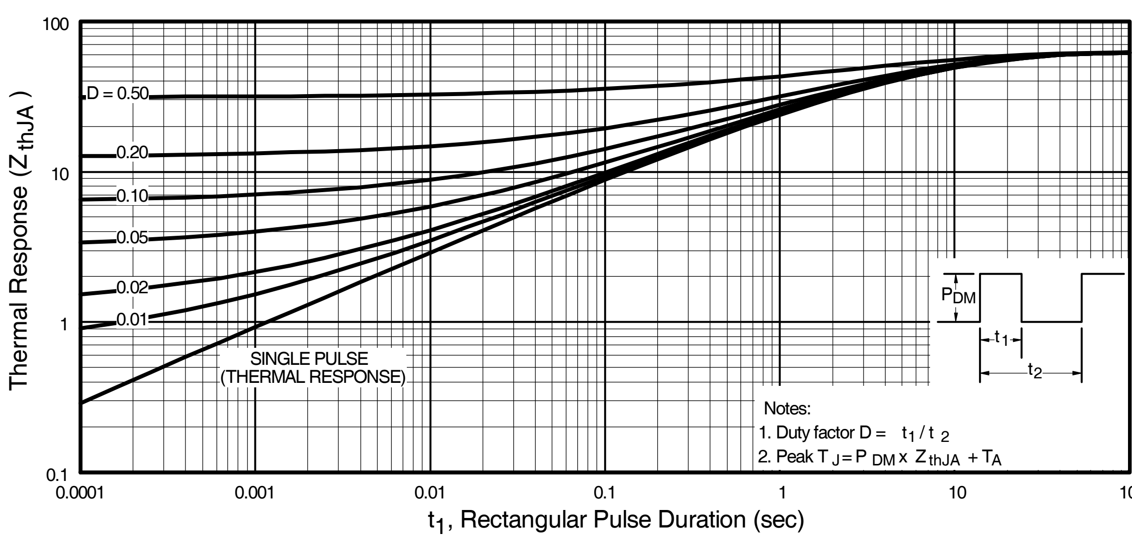
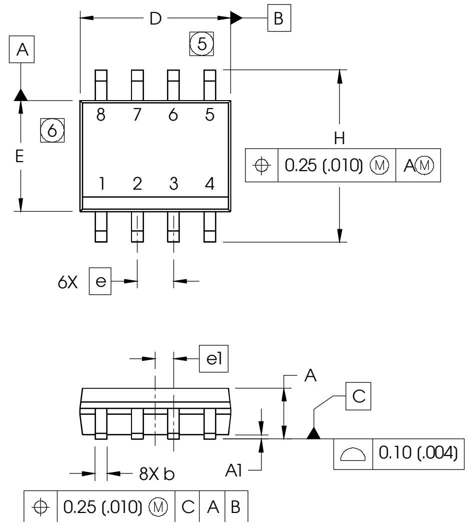


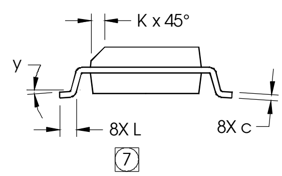
Fig 11. Maximum Effective Transient Thermal Impedance, Junction-to-Ambient

SO-8 Package Outline

Dimensions are shown in millimeters (inches)



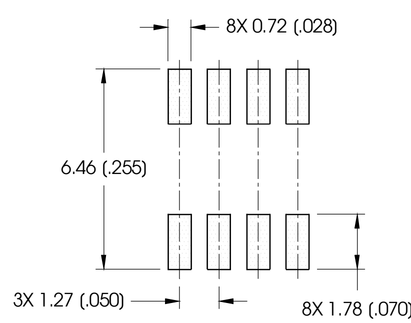
DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.0532	.0688	1.35	1.75
A1	.0040	.0098	0.10	0.25
b	.013	.020	0.33	0.51
c	.0075	.0098	0.19	0.25
D	.189	.1968	4.80	5.00
E	.1497	.1574	3.80	4.00
e	.050 BASIC		1.27 BASIC	
e 1	.025 BASIC		0.635 BASIC	
H	.2284	.2440	5.80	6.20
K	.0099	.0196	0.25	0.50
L	.016	.050	0.40	1.27
y	0°	8°	0°	8°



NOTES:

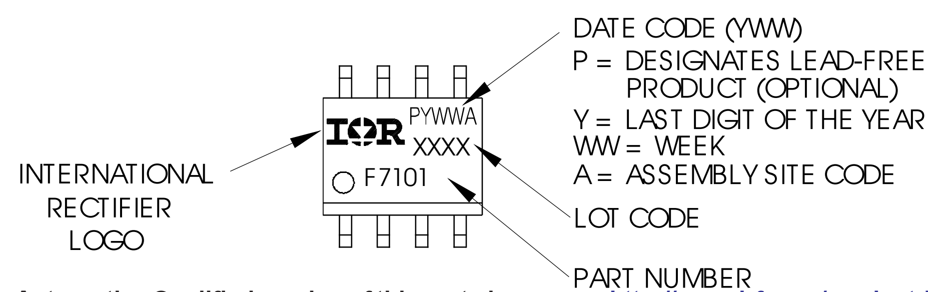
1. DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994.
2. CONTROLLING DIMENSION: MILLIMETER
3. DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
4. OUTLINE CONFORMS TO JEDEC OUTLINE MS-012AA.
5. DIMENSION DOES NOT INCLUDE MOLD PROTRUSIONS. MOLD PROTRUSIONS NOT TO EXCEED 0.15 [.006].
6. DIMENSION DOES NOT INCLUDE MOLD PROTRUSIONS. MOLD PROTRUSIONS NOT TO EXCEED 0.25 [.010].
7. DIMENSION IS THE LENGTH OF LEAD FOR SOLDERING TO A SUBSTRATE.

FOOTPRINT



SO-8 Part Marking

EXAMPLE: THIS IS AN IRF7101 (MOSFET)



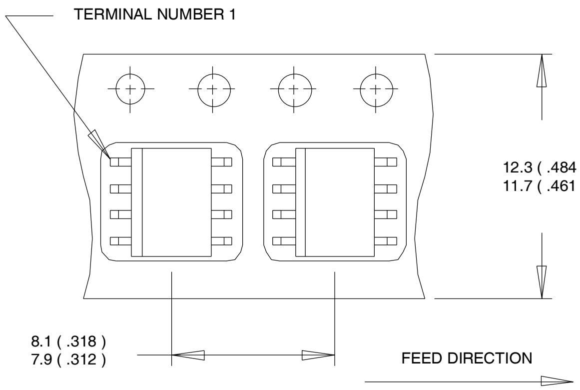
Note:

1. For an Automotive Qualified version of this part please see : http://www.irf.com/product-info/auto/

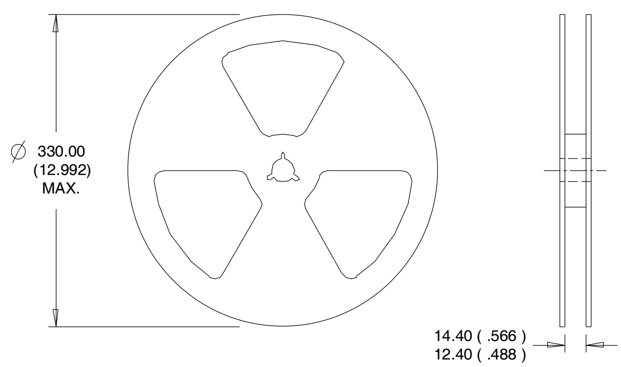
2. For the most current drawing please refer to IR website at: http://www.irf.com/package/

SO-8 Tape and Reel

Dimensions are shown in millimeters (inches)



NOTES:
1. CONTROLLING DIMENSION : MILLIMETER.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS(INCHES).
3. OUTLINE CONFORMS TO EIA-481 & EIA-541.



NOTES :
1. CONTROLLING DIMENSION : MILLIMETER.
2. OUTLINE CONFORMS TO EIA-481 & EIA-541.

Note: For the most current drawing please refer to IR website at: http://www.irf.com/package/

Qualification information[†]

Qualification level	Industrial (per JEDEC JESD47F[††] guidelines)	
Moisture Sensitivity Level	SO-8	MSL1 (per JEDEC J-STD-020D[††])
RoHS compliant	Yes	

† Qualification standards can be found at International Rectifier's web site: http://www.irf.com/product-info/reliability
†† Applicable version of JEDEC standard at the time of product release

Revision History

Date	Comment
8/22/2014	• Updated data sheet based on corporate template. • Added Qual level on page 8. • Added ordering information and updated to reflect the End-Of-life (EOL) of the Tube option (EOL notice #529) on page1.

International
IOR Rectifier
IR WORLD HEADQUARTERS: 101 N. Sepulveda Blvd., El Segundo, California 90245, USA
To contact International Rectifier, please visit http://www.irf.com/whoto-call/