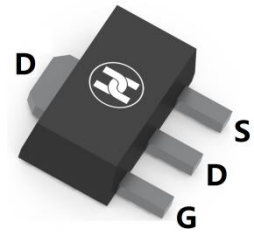
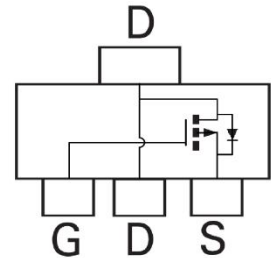


HIGH VOLTAGE MOSFET (P-CHANNEL)
FEATURES

- $V_{DS}=-240V, R_{DS(ON)}\leq 9\Omega @ V_{GS}=-10V, I_D=-200mA$
- Low threshold and Fast switching
- For Electronic hook switches applications
- For Telecoms and Battery powered equipment applications
- Complementary Type - ZVN4424Z
- Surface Mount device


SOT-89

MECHANICAL DATA

- Case: SOT-89
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.055 grams (approximate)

MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	-240	V
Gate-source voltage	V_{GS}	± 40	V
Continuous drain current	I_D	-200	mA
Pulsed drain current	I_{DM}	-1.0	A
Power dissipation	P_D^*	1	W
Operating and Storage temperature	T_J, T_{STG}	-55 ~ +150	$^\circ C$

Note: *:recommended PD calculated using FR4 measuring 15x15x0.6mm

Refer to the handling instructions for soldering surface mount components.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Drain-Source breakdown voltage	$V_{(BR)DSS}$	-240			V	$V_{GS}=0V, I_D=-1mA$
Gate-threshold voltage	$V_{GS(th)}$	-0.7	-1.4	-2.0	V	$V_{DS}=V_{GS}, I_D=-1mA$
Gate-body leakage current	I_{GSS}			-100	nA	$V_{DS}=0V, V_{GS}=\pm 40V$
Zero gate voltage drain current	I_{DSS}			-10	μA	$V_{DS}=-240V, V_{GS}=0V$
				-100	μA	$V_{DS}=-190V, V_{GS}=0V, T_J=125^\circ C$
On-State Drain Current	$I_{D(ON)}$	-0.75	-1.0		A	$V_{DS}=-10V, V_{GS}=-10V$
Drain-source on-resistance	$R_{DS(ON)}$		7.1	9	Ω	$V_{GS}=-10V, I_D=-200mA$
			8.8	11	Ω	$V_{GS}=-3.5V, I_D=-100mA$
Forward Trans-conductance (1) (2)	g_{fs}	125			mS	$V_{DS}=-10V, I_D=-200mA$
Input capacitance(2)	C_{iss}		100	200	pF	$V_{DS}=-25V, V_{GS}=0V, f=1MHz$
Output capacitance(2)	C_{oss}		18	25	pF	
Reverse transfer capacitance(2)	C_{rss}		5	15	pF	
Turn-on delay time(2)(3)	$t_{d(on)}$		8	15	nS	$V_{DD}=-50V, I_D=-250mA, V_{GEN}=-10V$
Turn-on rise time(2)(3)	t_r		8	15	nS	
Turn-off delay time(2)(3)	$t_{d(off)}$		26	40	nS	
Turn-off fall time(2)(3)	t_f		20	30	nS	

Note:(1) Measured under pulsed conditions. Width=300 μs . Duty cycle $\leq 2\%$.

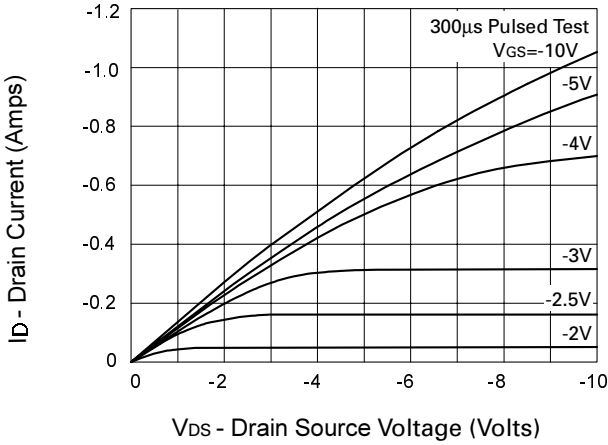
(2) Sample test.

(3) Switching times measured with 50 Ω source impedance and <5ns rise time on a pulse generator

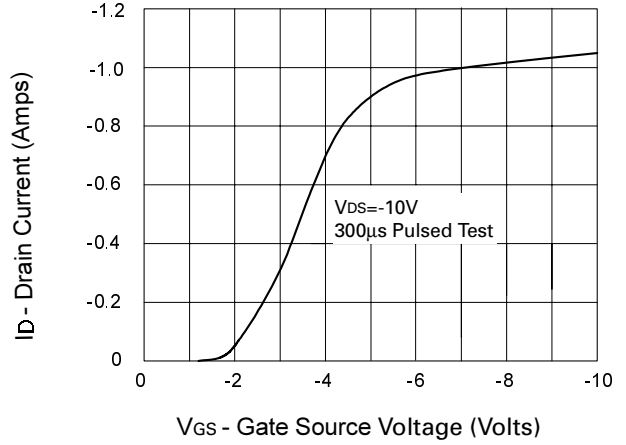
Spice parameter data is available upon request for this device

HIGH VOLTAGE MOSFET (P-CHANNEL)

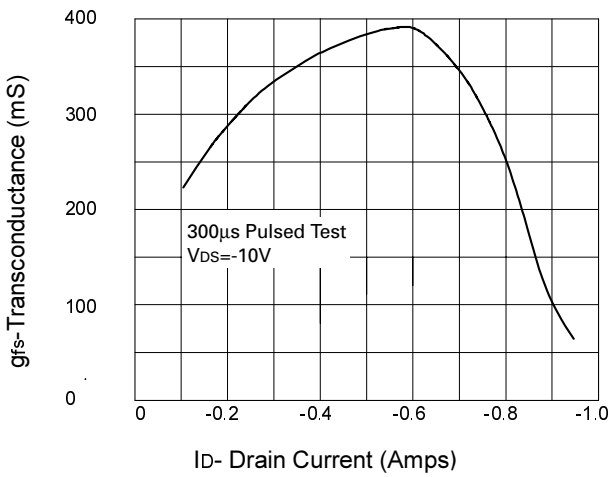
Typical Characteristics



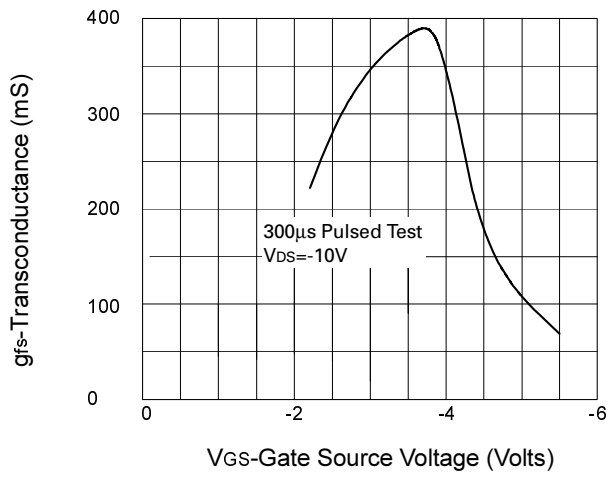
Saturation Characteristics



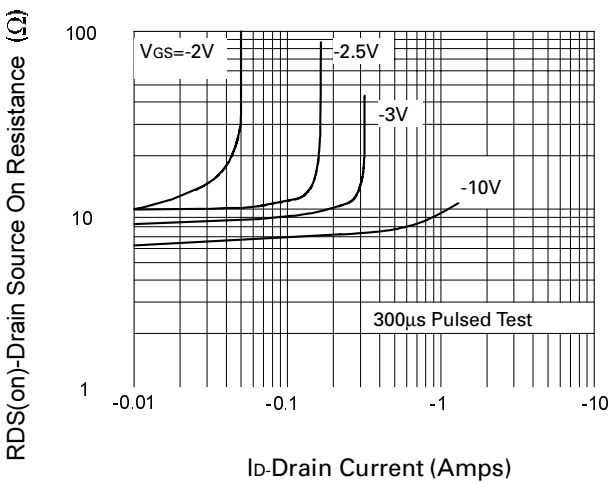
Transfer Characteristics



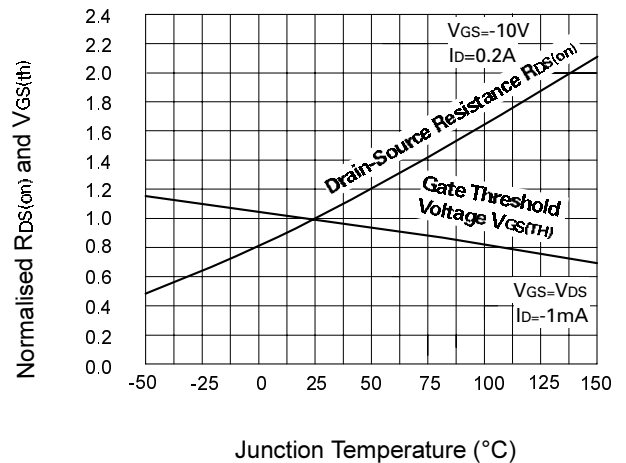
Transconductance v drain current



Transconductance v gate-source voltage

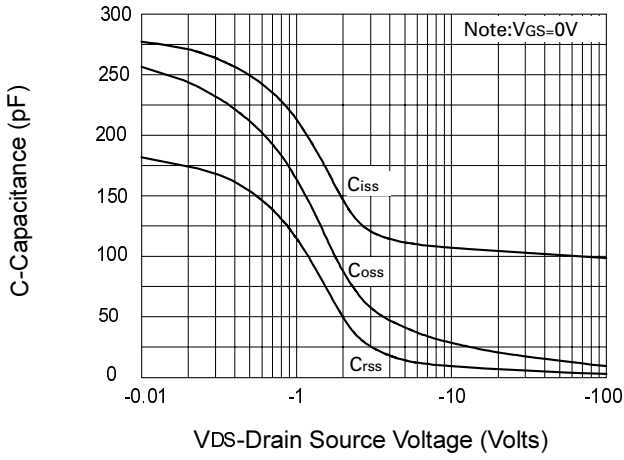


On-resistance vs Drain Current

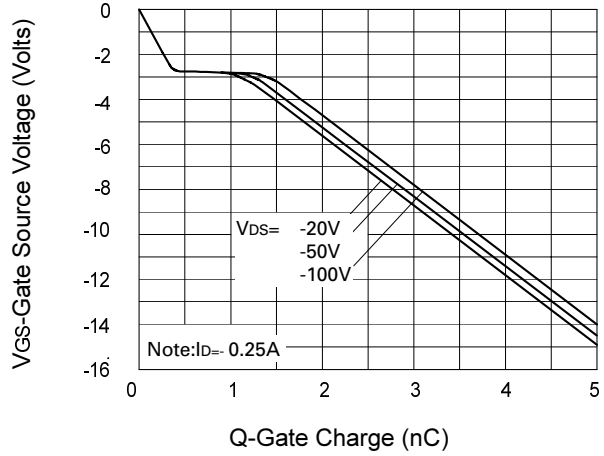


Normalised RDS(on) and VGS(th) vs Temperature

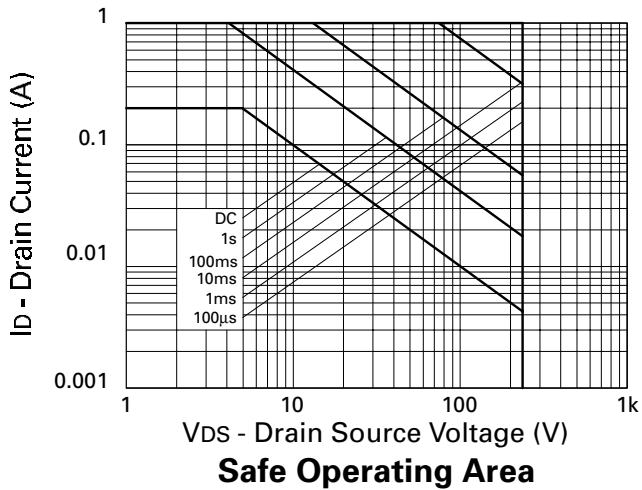
HIGH VOLTAGE MOSFET (P-CHANNEL)



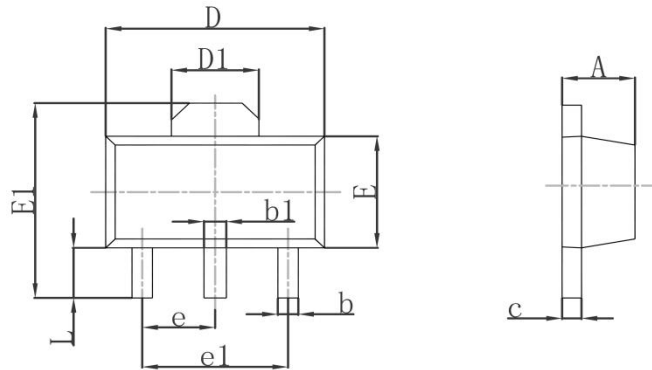
Capacitance v drain-source voltage



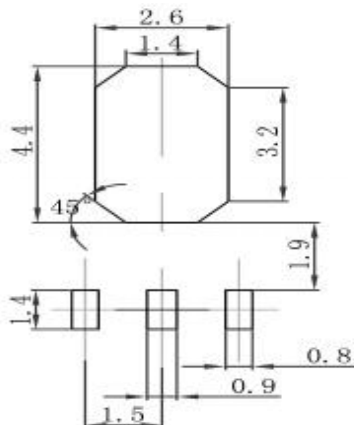
Gate charge v gate-source voltage



Safe Operating Area

HIGH VOLTAGE MOSFET (P-CHANNEL)
SOT-89 Package Outline Dimensions


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550REF		0.061REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	3.000TYP		0.118TYP	
L	0.900	1.200	0.035	0.047

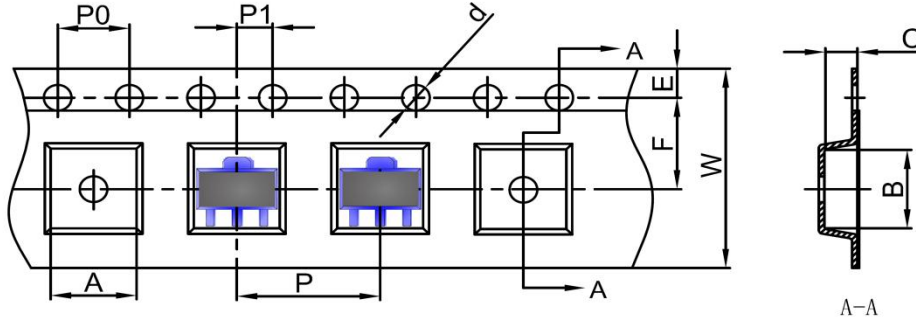
SOT-89 Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

HIGH VOLTAGE MOSFET (P-CHANNEL)

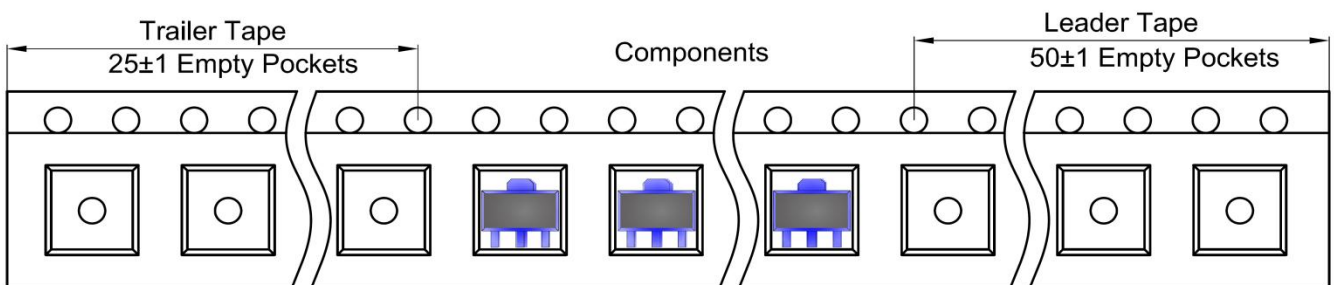
SOT-89 Tape and Reel

SOT-89 Embossed Carrier Tape

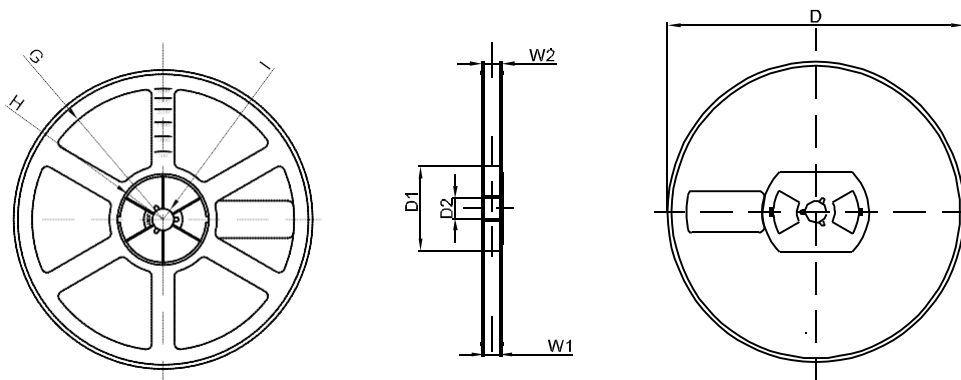


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-89	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-89 Tape Leader and Trailer



SOT-89 Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	13.20	16.50
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1