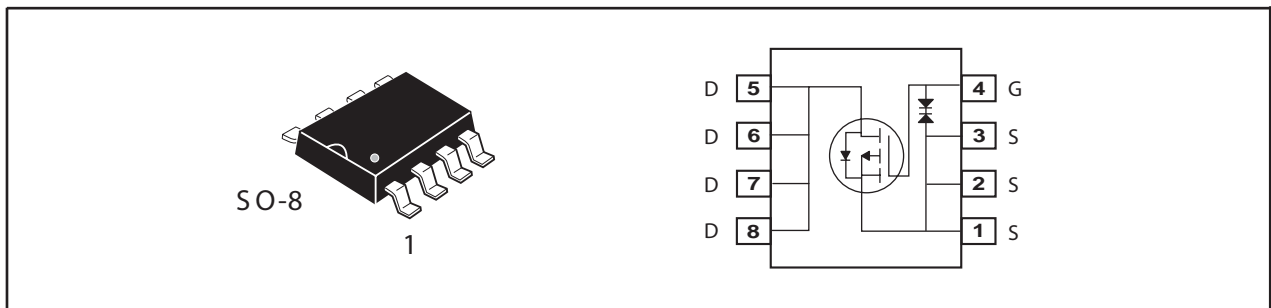


**P-Channel Enhancement Mode Field Effect Transistor****PRODUCT SUMMARY**

V _{DS}	I _D	R _{DS(ON)} (mΩ) Max
-30V	-10A	12.5 @ V _{GS} =-10V
		16.5 @ V _{GS} =-4.5V

FEATURES

- Super high dense cell design for low R_{DS(ON)}.
- Rugged and reliable.
- Surface Mount Package.
- ESD Protected.

**ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)**

Symbol	Parameter	Limit	Units
V _{DS}	Drain-Source Voltage	-30	V
V _{GS}	Gate-Source Voltage	±24	V
I _D	Drain Current-Continuous ^a	T _A =25°C	-10
		T _A =70°C	-8
I _{DM}	-Pulsed ^b	-56	A
E _{AS}	Single Pulse Avalanche Energy ^d	156	mJ
P _D	Maximum Power Dissipation ^a	T _A =25°C	2.5
		T _A =70°C	1.6
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 to 150	°C

THERMAL CHARACTERISTICS

R _{θ JA}	Thermal Resistance, Junction-to-Ambient ^a	50	°C/W
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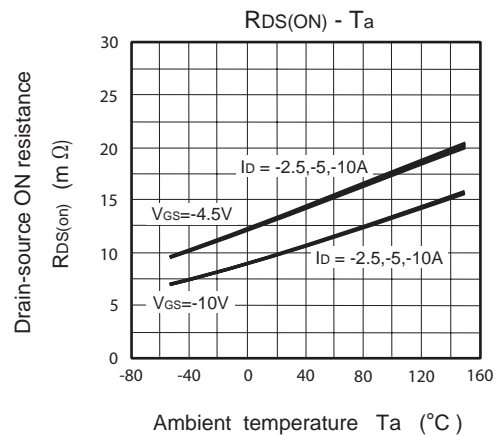
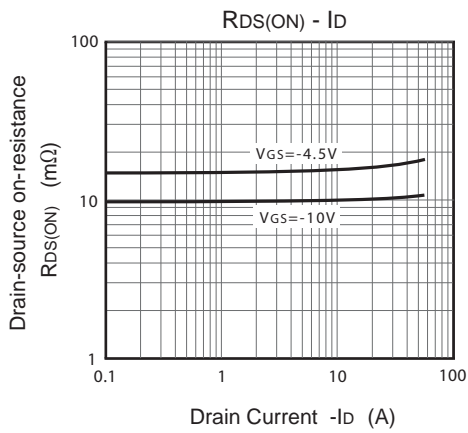
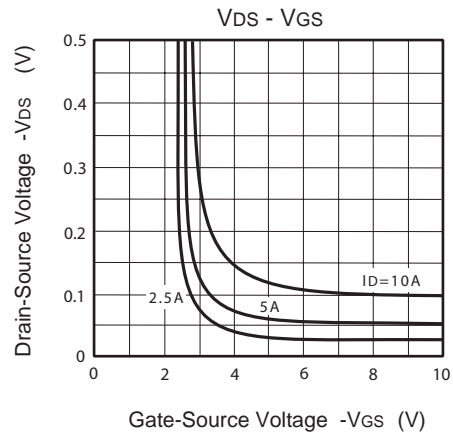
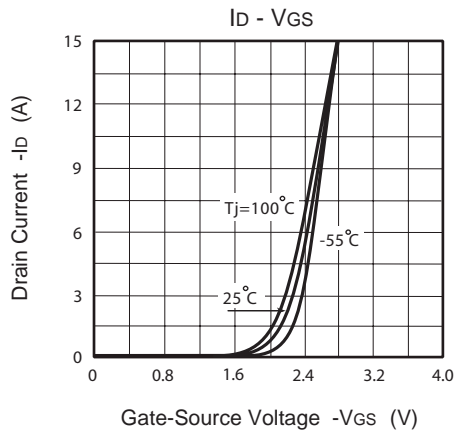
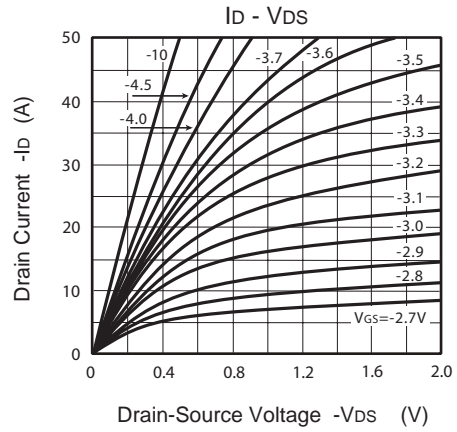
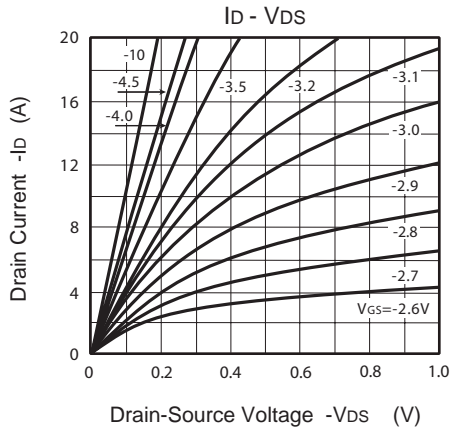
STM4639T

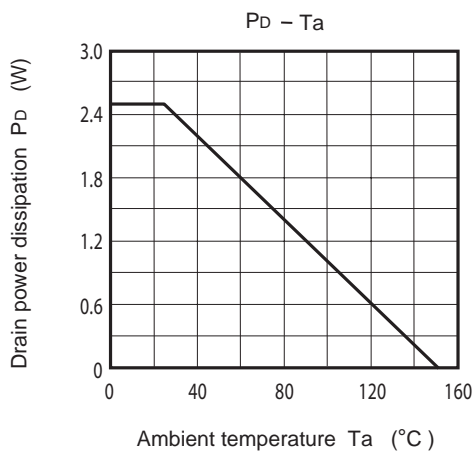
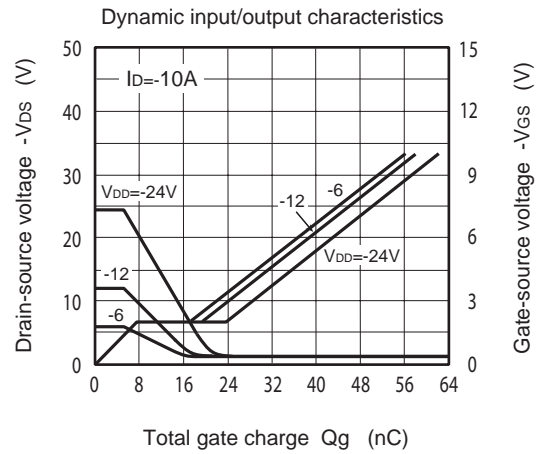
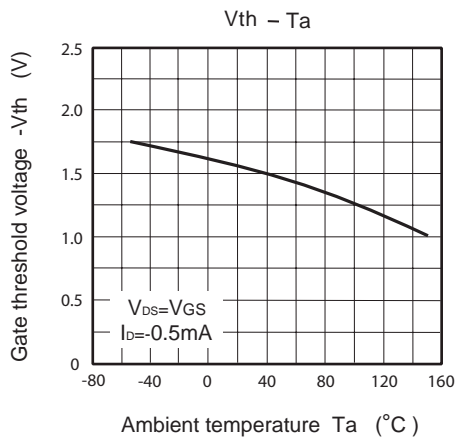
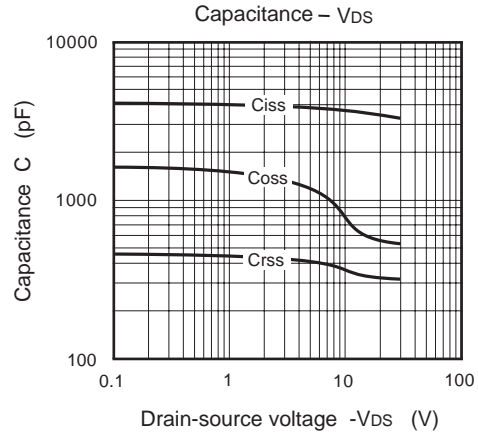
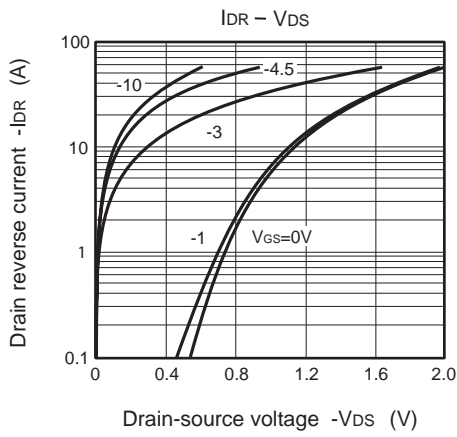
Ver 1.1

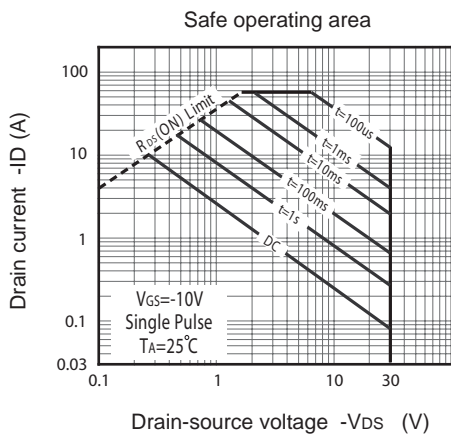
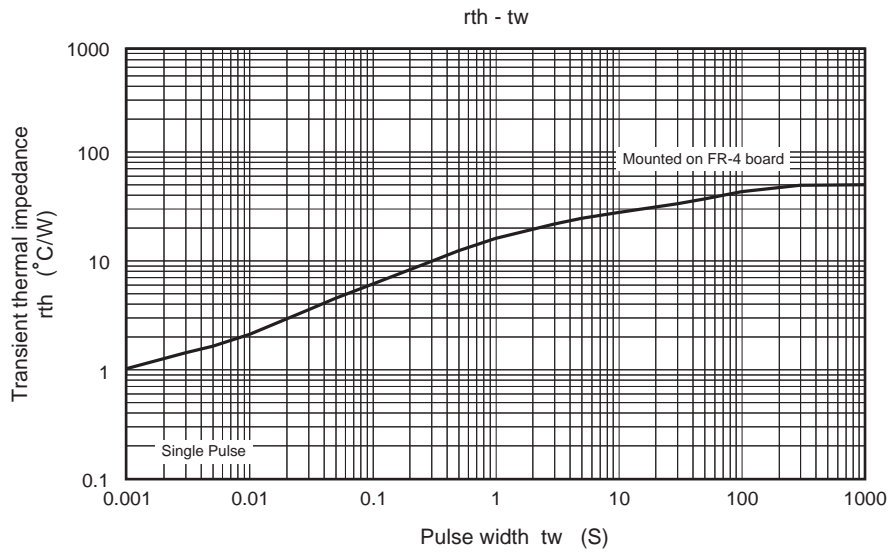
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
B _V DSS	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =-10mA	-30			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-24V , V _{GS} =0V			-1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±24V , V _{DS} =0V			±10	uA
ON CHARACTERISTICS						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-0.5mA	-1.0	-1.7	-3.0	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =-10V , I _D =-5A		10	12.5	m ohm
		V _{GS} =-4.5V , I _D =-5A		13	16.5	m ohm
DYNAMIC CHARACTERISTICS [°]						
C _{ISS}	Input Capacitance	V _{DS} =-10V, V _{GS} =0V f=1.0MHz		3375		pF
C _{OSS}	Output Capacitance			768		pF
C _{RSS}	Reverse Transfer Capacitance			352		pF
SWITCHING CHARACTERISTICS [°]						
t _{D(ON)}	Turn-On Delay Time	V _{DD} =-15V I _D =-5A V _{GS} =-10V R _{GEN} = 4.7 ohm		46		ns
t _r	Rise Time			60		ns
t _{D(OFF)}	Turn-Off Delay Time			210		ns
t _f	Fall Time			57		ns
Q _g	Total Gate Charge	V _{DS} =-24V, I _D =-10A, V _{GS} =-10V		62		nC
Q _{gs}	Gate-Source Charge	V _{DS} =-24V, I _D =-10A, V _{GS} =-10V		7.6		nC
Q _{gd}	Gate-Drain Charge			16		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =-10A		-1.2	-1.8	V
Notes a.Surface Mounted on FR4 Board,t < 10sec. b.Pulse Test:Pulse Width ≤ 300us, Duty Cycle ≤ 2%. c.Guaranteed by design, not subject to production testing. d.Starting T _J =25°C,L=0.5mH,V _{DD} = 20V.(See Figure13)						

Dec,24,2013

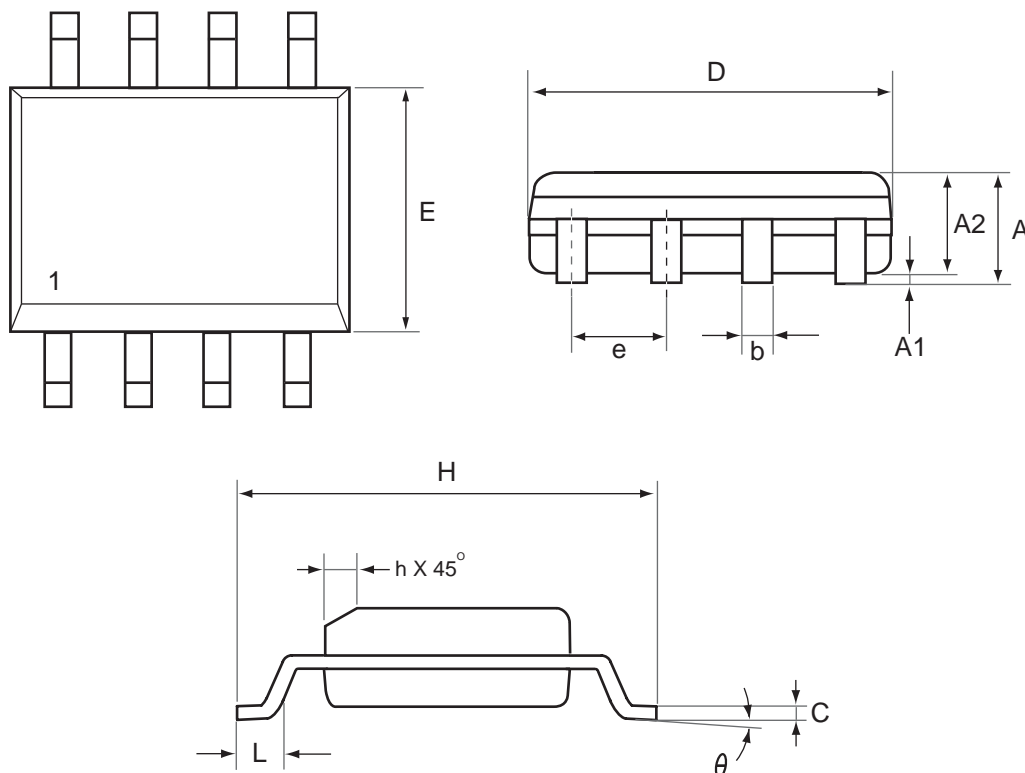






PACKAGE OUTLINE DIMENSIONS

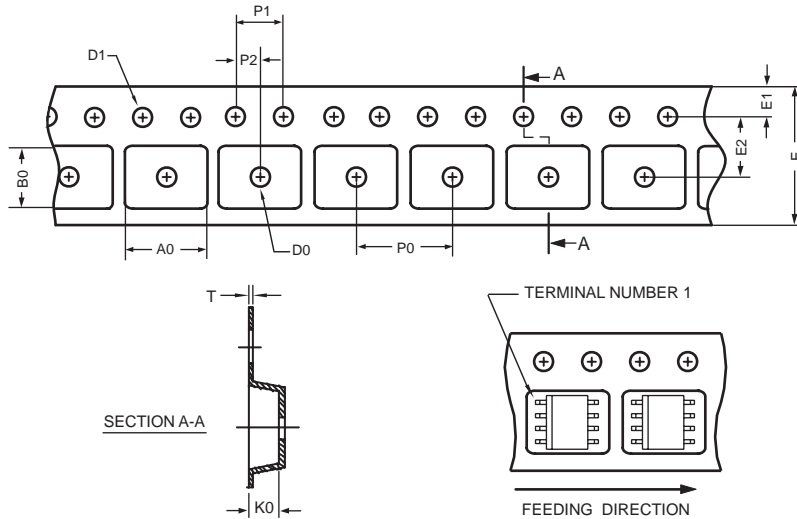
SO-8



SYMBOLS	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.35	1.75	0.053	0.069
A1	0.10	0.25	0.004	0.010
A2	1.25	1.63	0.049	0.064
b	0.31	0.51	0.012	0.020
C	0.17	0.25	0.007	0.010
D	4.80	5.00	0.189	0.197
E	3.70	4.00	0.146	0.157
e	1.27 REF.		0.050 BSC	
H	5.80	6.20	0.228	0.244
L	0.40	1.27	0.016	0.050
θ	0°	8°	0°	8°
h	0.25	0.50	0.010	0.020

SO-8 Tape and Reel Data

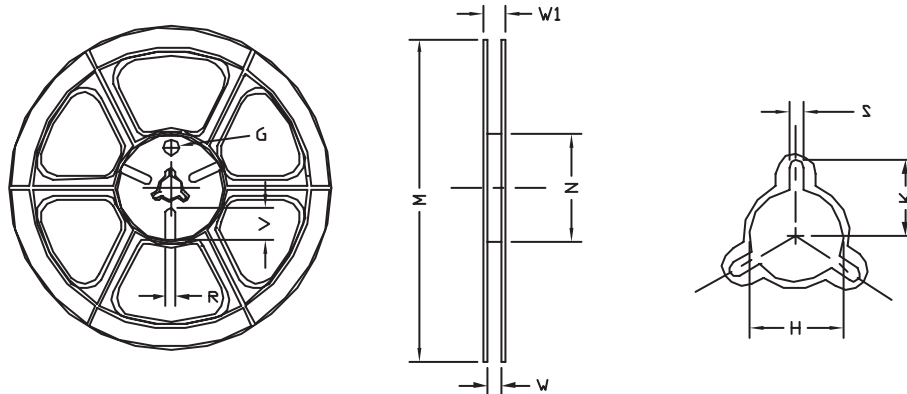
SO-8 Carrier Tape



unit:mm

PACKAGE	A0	B0	K0	D0	D1	E	E1	E2	P0	P1	P2	T
SOP 8N 150mil	6.50 ±0.15	5.25 ±0.10	2.10 ±0.10	φ 1.5 (MIN)	φ 1.55 ±0.10	12.0 +0.3 -0.1	1.75 ±0.10	5.5 ±0.10	8.0 ±0.10	4.0 ±0.10	2.0 ±0.10	0.30 ±0.013

SO-8 Reel



UNIT:mm

TAPE SIZE	REEL SIZE	M	N	W	W1	H	K	S	G	R	V
12 mm	φ 330	330 ± 1	62 ±1.5	12.4 +0.2	16.8 - 0.4	φ 12.75 + 0.15	---	2.0 ±0.15	---	---	---

TOP MARKING DEFINITION

