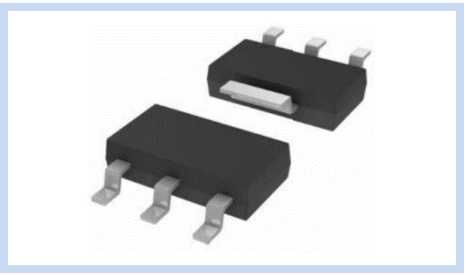
N-Channel MOSFET
60V 4A 3W SOT-223

MFT6N4A0S223

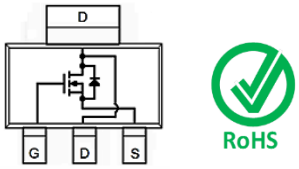
MERITEK

FEATURE



- $R_{DS(ON)}$<102mΩ, V_{GS}=10V, I_D=2A
- $R_{DS(ON)}$<126mΩ, V_{GS}=4.5V, I_D=1A
- High Dense Cell Design for Extremely Low $R_{DS(ON)}$.
- Application: Power Management in Note book, Battery Powered System
- Rugged Construction Design

MECHANICAL DATA



RoHS

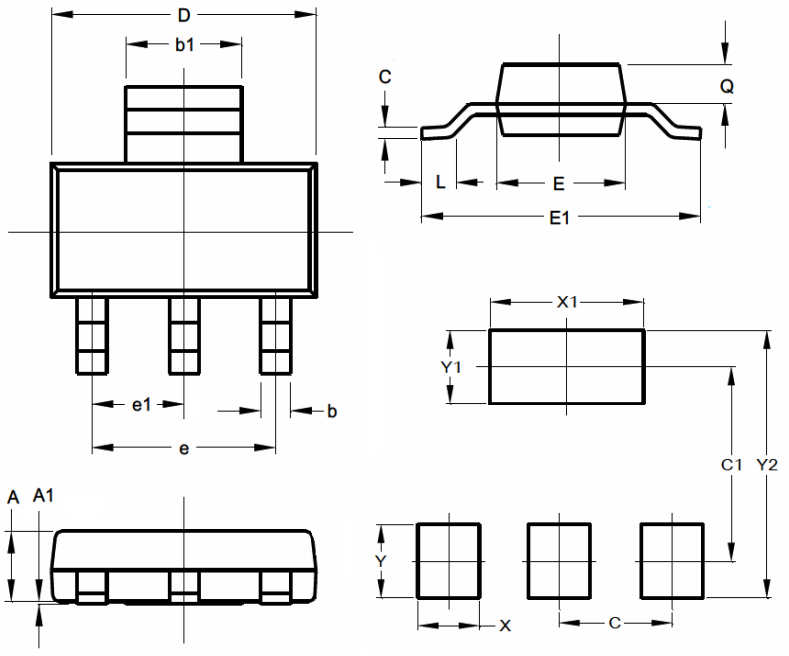
- Case: SOT-223 Package
- Terminals: Solderable per MIL-STD-750, Method 2026

MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±20	V
Drain Current – Continuous	T_A=25℃	I_D	4	A
Drain Current – Pulsed		I_{DM}	16	A
Power Dissipation	T_A=25℃	P_D	3	W
Operating Junction and Storage Temperature Range		T_J , T_{stg}	-55 to 150	℃
Thermal Resistance from Junction to Ambient		$R_{\theta JA}$	42	℃ / W

DIMENSIONS

Item	Min (mm)	Max (mm)
A	1.50	1.70
A1	0.02	0.10
b	0.67	0.80
b1	2.95	3.20
C	0.24	0.35
D	6.30	6.85
e	4.60	
e1	2.30	
E	3.30	3.80
E1	6.70	7.30
L	0.90	--
X	1.20	
X1	3.50	
Y	1.60	
Y1	1.80	
Y2	8.00	
c	2.30	
c1	6.30	

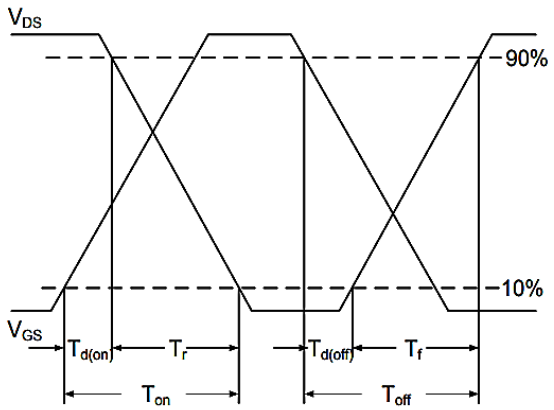


ELECTRICAL CHARACTERISTICS

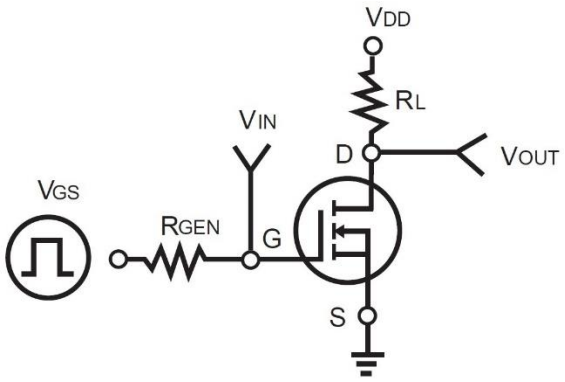
Off Characteristics	Conditions	Symbol	Min	Typ.	Max	Unit
Drain-Source Breakdown Voltage	V_{GS}=0V, I_D= 250μA	BV_{DSS}	60	--	--	V
Gate Threshold Voltage	V_{GS}=V_{DS}, I_D=-250μA	$V_{GS(th)}$	1	--	3	V
Gate Leakage Current	V_{DS}=0V, V_{GS}=±20V	I_{GSS}	--	--	±0.1	μA
Zero Gate Voltage Drain Current	V_{DS}= 60V, V_{GS}=0V	I_{DSS}	--	--	1.0	μA
On Characteristics	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
Static Drain-Source On-Resistance	V_{GS}=10V, I_D= A	$R_{DS(ON)}$	--	85	102	mΩ
	V_{GS}=4.5V, I_D=1A		--	97	126	mΩ
Dynamic Characteristics	**Conditions**	**Symbol**	**--**	**Typ.**	**Max**	**Unit**
Input Capacitance	V_{DS}=30V, V_{GS}=0V F=1.0MHz	C_{iss}	--	405	--	pF
Output Capacitance		C_{oss}	--	70	--	pF
Reverse Transfer Capacitance		C_{rss}	--	30	--	pF
Turn-On Delay Time	V_{DS}= 30V, I_D=-1.5A, V_{GS}=10V, R_G=3Ω	$T_{d(on)}$	--	7	--	nS
Rise Time		T_r	--	2.7	--	nS
Turn-Off Delay Time		$T_{d(off)}$	--	18.8	--	nS
Fall Time		T_f	--	1.6	--	nS
Total Gate Charge	V_{DS}=30V, V_{GS}=4.5V, I_D=-2.5A	Q_g	--	3.6	--	nC
Gate-Source Charge		Q_{gs}	--	0.8	--	nC
Gate-Drain Charge		Q_{gd}	--	1.6	--	nC
Drain-Source Body Diode	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
Diode Forward Voltage	I_S= -1A,V_{GS}=0V	V_{SD}	--	--	1.2	V
Diode Forward Current	--	I_S	--	--	2.5	A

Note:
1. T_A = 25°C unless otherwise noted.
2. Pulse test: Pulse width<300μs, Duty cycle<2%.
3. Repetitive Rating: Pulse width limited by maximum junction temperature
4. Device mounted on FR-4 Board, t≦10 sec.
5. Guaranteed by design, not subject to production testing.

Switching Time Waveform

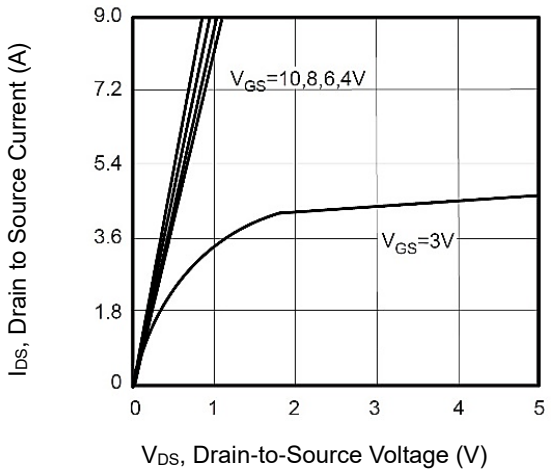


Switching Test Circuit

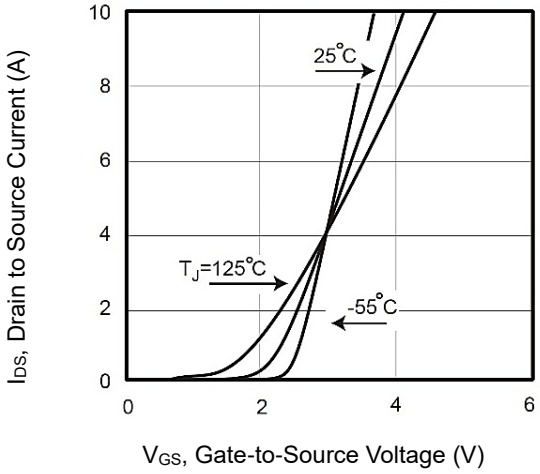


CHARACTERISTIC CURVES

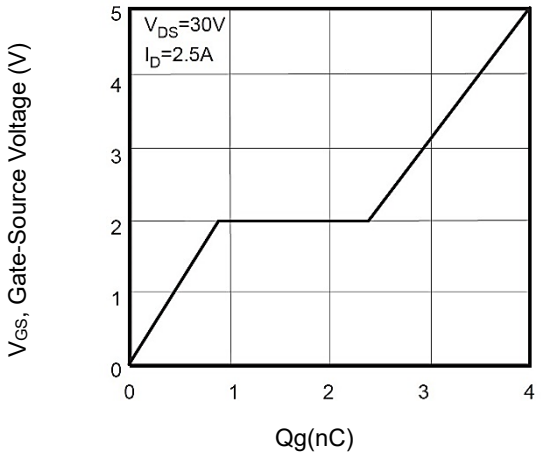
On Region Characteristics



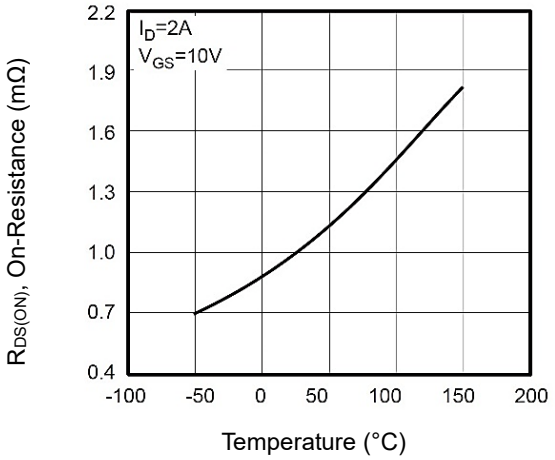
Transfer Characteristics



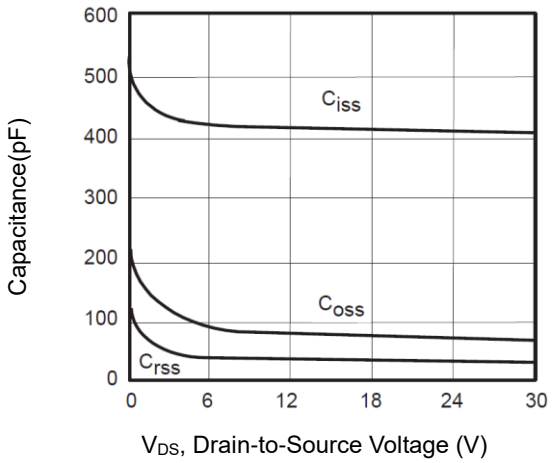
Gate Charge Characteristics



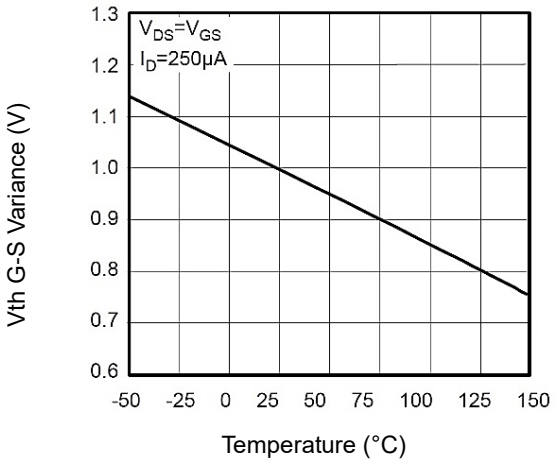
On-Resistance vs. Junction Temperature



Capacitance vs. Drain-Source Voltage

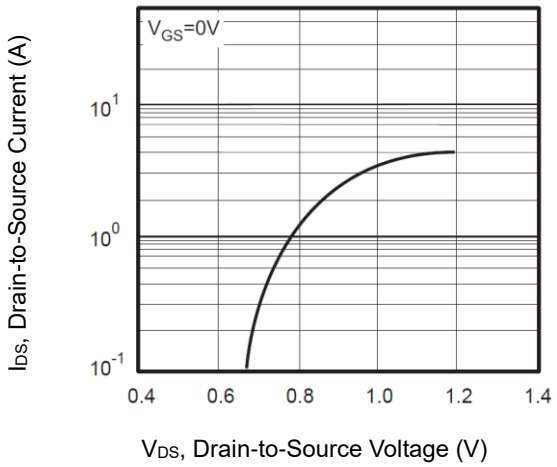


Threshold Voltage Variance vs. Temperature

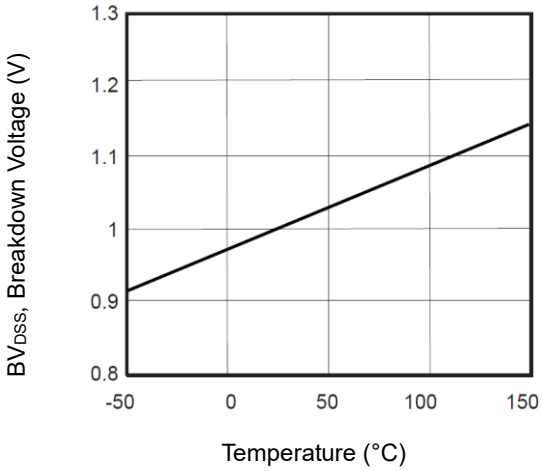


CHARACTERISTIC CURVES

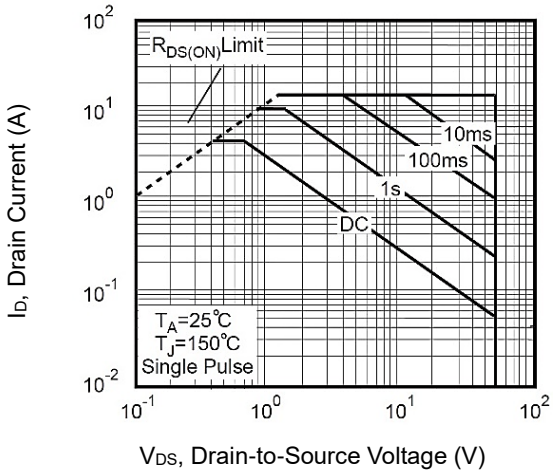
Body Diode Characteristics



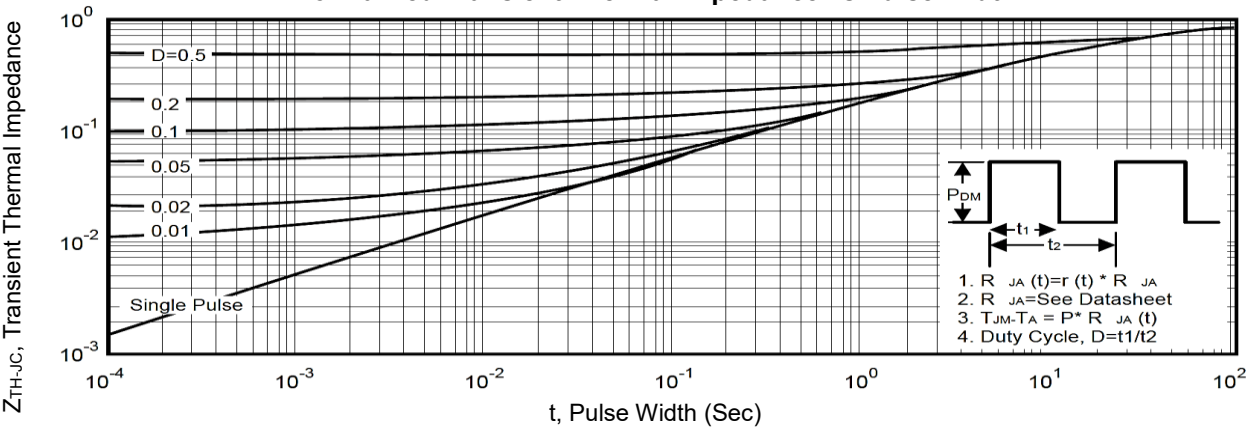
Breakdown Voltage vs Temperature



Maximum Safe Operating Area



Normalized Transient Thermal Impedance vs Pulse Width



ENTEGRECİ

Bu belge www.entegreci.com üzerinden sunulmaktadır.

Elektronik komponent tedarikinde Entegreci

Entegreci, Eskişehir merkezli, Türkiye geneline satış yapan bir elektronik komponent mağazasıdır. Entegreler (IC), mikrodenetleyiciler, transistörler, diyotlar, pasif elemanlar, konnektörler, modüller ve geliştirme kartları tek adetten seri üretim adetlerine kadar satılır. Ürün sayfalarında güncel stok durumunu, fiyatı ve datasheet bağlantısını bulabilirsiniz.

Parça koduyla arama

Üretici parça numarasını yazın; stok ve fiyatı hemen görün.

www.entegreci.com

Ürün kategorileri

Entegreden kapasitöre tüm elektronik komponent kategorileri.

Kategorilere göz atın

Üreticiler

Aradığınız üreticinin ürünlerini tek sayfada inceleyin.

Üreticileri görün

Toplu alım ve teklif

Listede olmayan ya da yüksek adetli parçalar için teklif isteyin.

Teklif isteyin

www.entegreci.com | **destek@entegreci.com** | **0850 305 90 34**

Entegreci is an online electronic components store based in Türkiye. Search by manufacturer part number to see stock, prices and datasheets for integrated circuits, microcontrollers, transistors, passive components and connectors, or request a quote for parts that are not listed.

Bu sayfa Entegreci tarafından eklenmiştir. Belgenin önceki sayfaları asıl yayıncısına aittir ve içeriği değiştirilmemiştir; en güncel sürüm için belgenin yayıncısına başvurun.