



SOT-23 Plastic-Encapsulate MOSFETS

N-Channel Enhancement Mode Field Effect Transistor

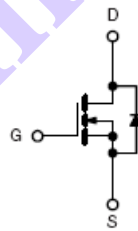
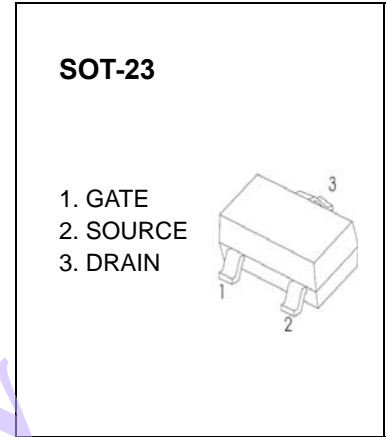
DESCRIPTION

The SE3406 use advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. This device is suitable for use as a load switch or in PWM applications.

Pb-Free package is available

RoHS product for packing code suffix "G"

Halogen free product for packing code suffix "H"



MARKING: R6

Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	3.6	A
Drain Current-Pulsed (note 1)	I_{DM}	15	A
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$



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SE3406

Electrical characteristics (T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
STATIC PARAMETERS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = 24V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1		3	V
Drain-source on-resistance (note 2)	R _{DS(on)}	V _{GS} = 10V, I _D = 3.6A			65	mΩ
		V _{GS} = 4.5V, I _D = 2.8A			105	mΩ
Forward transconductance (note 2)	g _{FS}	V _{DS} = 5V, I _D = 3.6A	3			S
Diode forward voltage	V _{SD}	I _S = 1A			1	V
DYNAMIC PARAMETERS (note 3)						
Input capacitance	C _{iss}	V _{DS} = 15V, V _{GS} = 0V, f = 1MHz			375	pF
Output capacitance	C _{oss}			57		pF
Reverse transfer capacitance	C _{rss}			39		pF
Gate resistance	R _g	V _{DS} = 0V, V _{GS} = 0V, f = 1MHz			6	Ω
SWITCHING PARAMETERS (note 3)						
Turn-on delay time	t _{d(on)}	V _{GS} = 10V, V _{DS} = 15V, R _L = 2.2Ω, R _{GEN} = 3Ω		4.6		ns
Turn-on rise time	t _r			1.9		ns
Turn-off delay time	t _{d(off)}			20.1		ns
Turn-off fall time	t _f			2.6		ns

Notes :

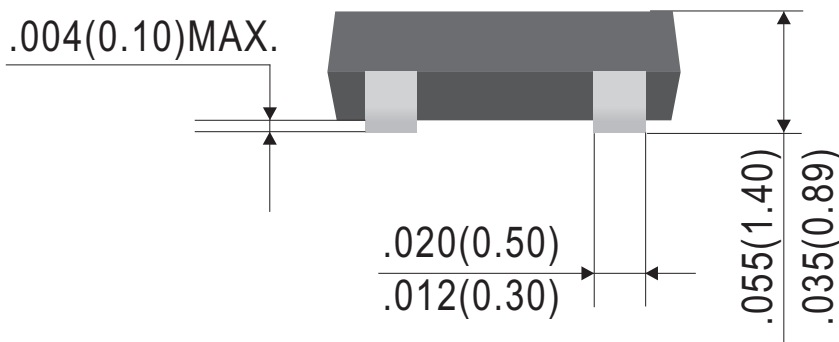
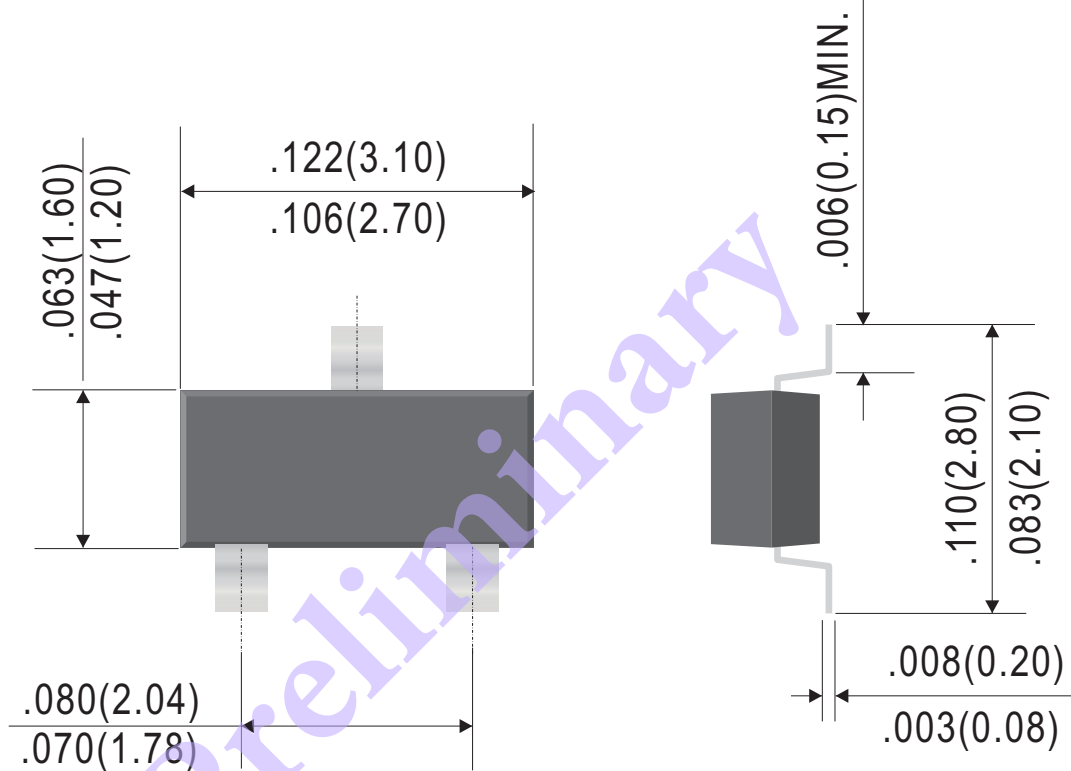
1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Pulse Test : Pulse width ≤ 300μs, duty cycle ≤ 0.5%.
3. These parameters have no way to verify.



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Outline Drawing

SOT-23



Dimensions in inches and (millimeters)

Rev.D



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Ordering Information:

Device PN	Packing
SE3406-T ⁽¹⁾ G ⁽²⁾ -WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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