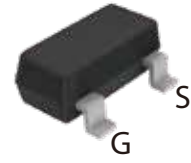
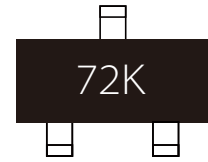


FEATURES

- | High density cell design for low $R_{DS(ON)}$
- | Voltage controlled small signal switch
- | Rugged and reliable
- | High saturation current capability
- | Load Switch for Portable Devices
- | DC/DC Converter
- | ESD Protected



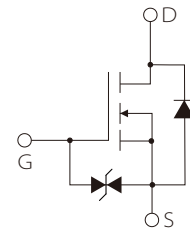
SOT-523



Marking

APPLICATION

- | Epoxy UL: 94V-0
- | Mounting Position: Any



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	0.34	A
Pulsed Drain Current (note 1)	I_{DM}	0.80	A
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-50- +150	$^\circ\text{C}$
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$

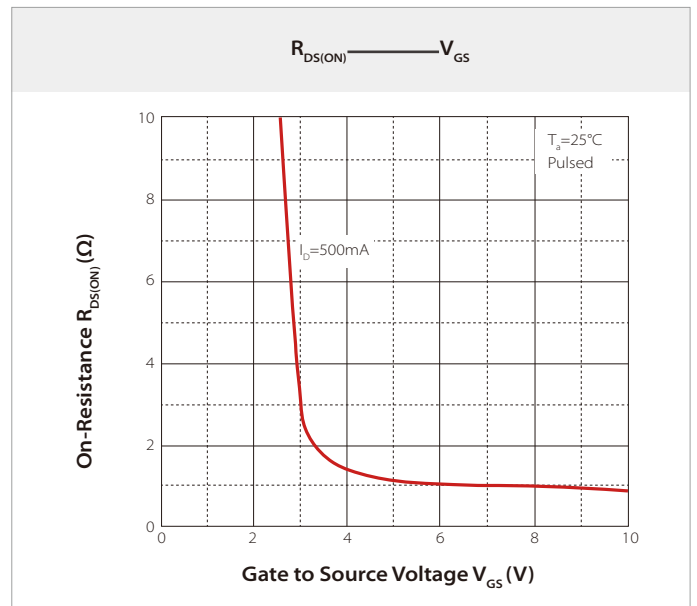
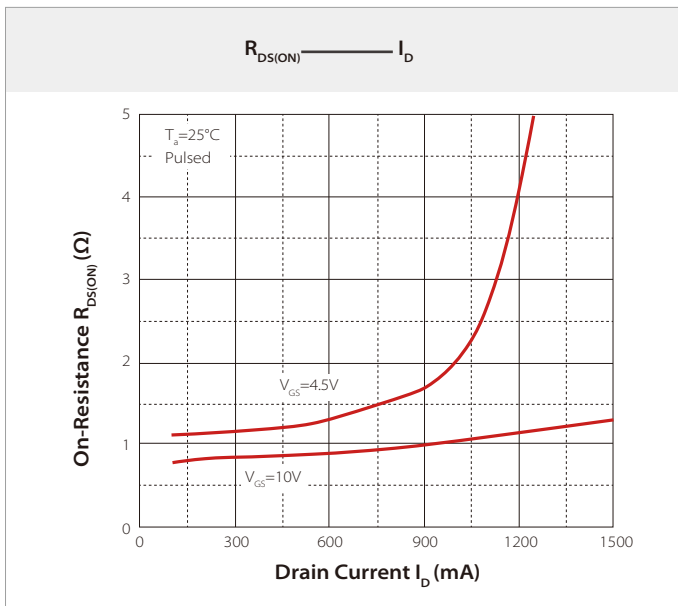
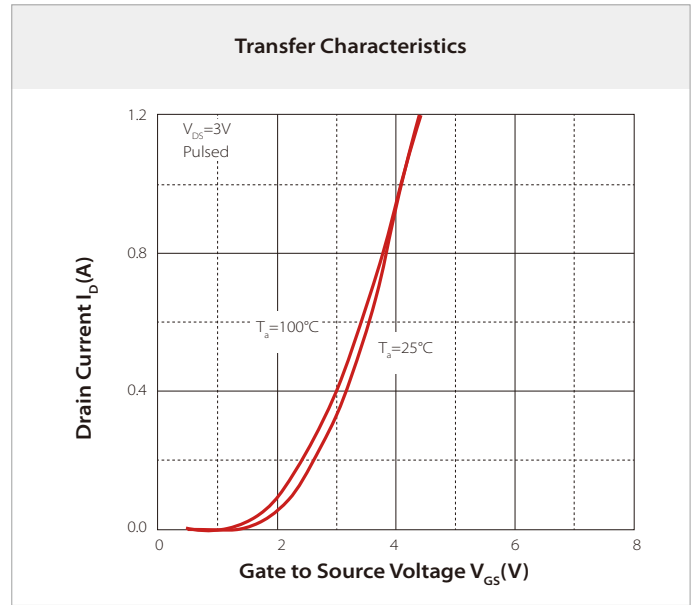
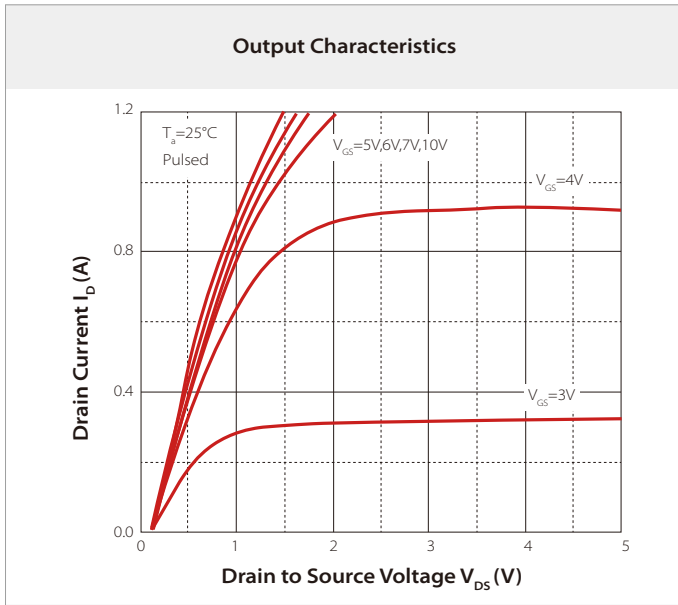
ELECTRICAL CHARACTERISTICS (T_A=25°C)

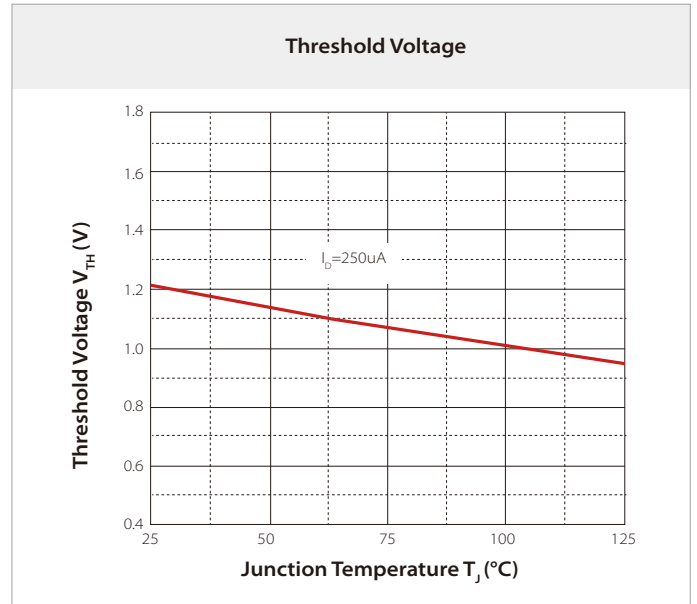
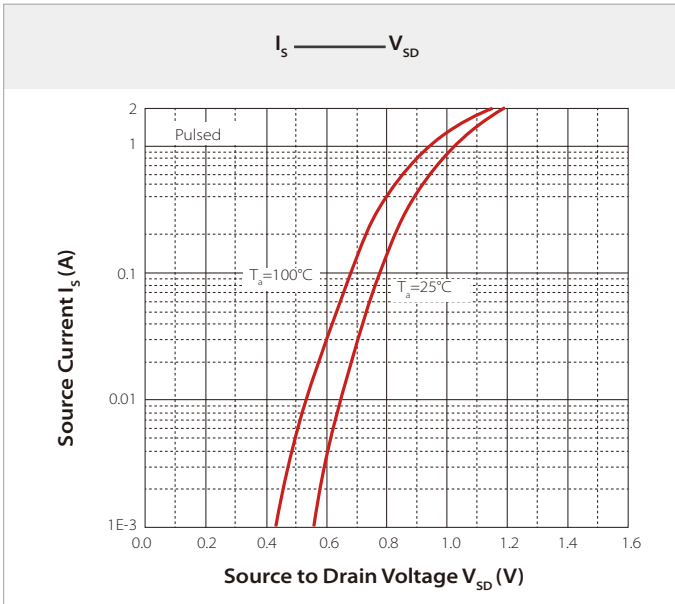
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static Parameters						
Drain-source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	60			V
Gate-Threshold voltage(note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =1mA	1.0	1.3	2.5	V
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =48V, V _{GS} =0V			1	μA
Gate Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±10	μA
On-state Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =7V	500			mA
Drain-Source On-Resistance (note2)	R _{DS(on)}	V _{GS} =10V, I _D =500mA		0.9	5	Ω
		V _{GS} =4.5V, I _C =200mA		1.1	5.3	Ω
Dynamic Parameters (Note 3)						
Input capacitance	C _{ISS}	V _{DS} = 10V, V _{GS} = 0V, f=1MHz			40	pF
Output capacitance	C _{OSS}				30	pF
Reverse Transfer capacitance	C _{rss}				10	pF
Switching Parameters (Note 3)						
Turn-on Delay Time	td(on)	V _{GS} =10V, V _{DD} =50V, R _G =50Ω R _L =250Ω, R _{GS} =50Ω			10	ns
Turn-off Delay Time	td(off)				15	ns
Reverse Recovery Time	trr	V _{GS} =0V, V _R =25V, I _S =300mA DIs/dt=-100a/us		30		ns
Recovered Charge	B _{VGS0}	I _S =±1mA	±21.5		±30	V
Drain-source Diode						
Diode Forward Voltage(note 2)	V _{SD}	I _S =300mA, V _{GS} =0V			1.5	V
Continuous Diode Forward Current	I _S				0.2	A
Pulsed Diode Forward(note 1)	I _{SM}				0.53	A

Notes:

1. Repetitive rating : Pulse width limited by junction temperature
2. Pulse width ≤300us, duty cycle ≤2%.
3. Guaranteed design, not subject to production testing.

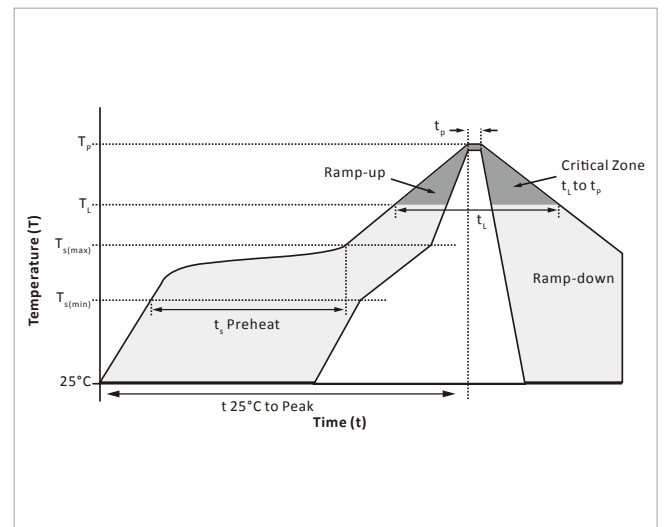
CHARACTERISTIC CURVES



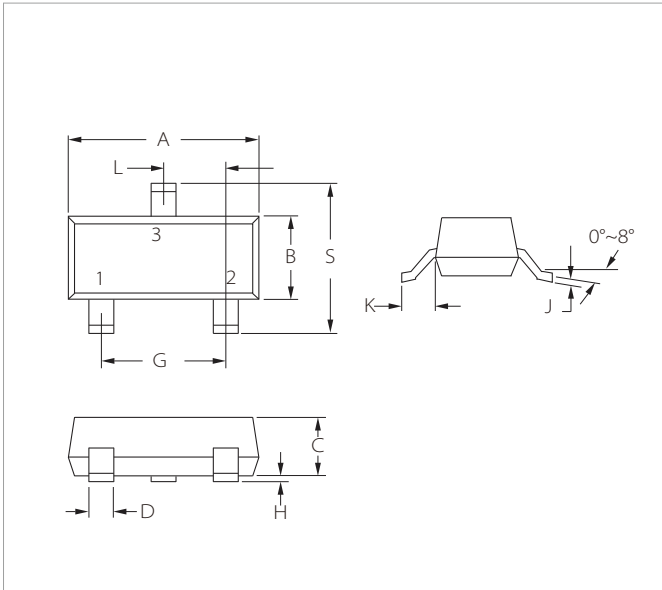


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150 $^\circ\text{C}$
	Temperature Max ($T_{s(\max)}$)	200 $^\circ\text{C}$
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3 $^\circ\text{C}/\text{second}$ max
$T_{s(\max)}$ to T_L - Ramp-up Rate		3 $^\circ\text{C}/\text{second}$ max
Reflow	Temperature (T_L) (Liquidus)	217 $^\circ\text{C}$
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260 $^\circ\text{C}$
Time within 5 $^\circ\text{C}$ of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6 $^\circ\text{C}/\text{second}$ max
Time 25 $^\circ\text{C}$ to peak Temperature (T_p)		8 minutes max.
Do not exceed		260 $^\circ\text{C}$

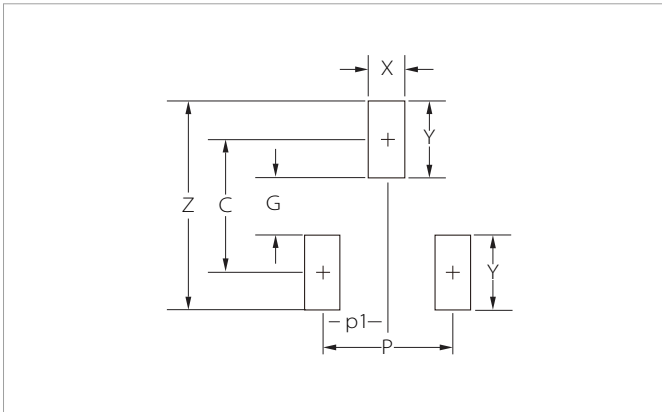


SOT-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.70	0.059	0.067
B	0.75	0.85	0.029	0.033
C	0.60	0.80	0.023	0.031
D	0.15	0.30	0.005	0.012
G	1.00BSC		0.039BSC	
H	0.00	0.10	0.000	0.004
J	0.10	0.20	0.004	0.008
K	(0.22)		(0.009)	
L	0.50BSC		0.020BSC	
S	1.45	1.75	0.057	0.069

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
C	(1.40)	(0.055)
P	1.00	0.039
p1	0.50	0.020
G	0.60	0.024
X	0.40	0.016
Y	0.80	0.031
Z	2.20	0.087

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SNM35T03N06	SOT-523	3000PCS	7"

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By QR Code

Website



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