
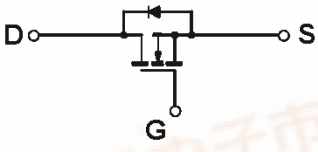
	<h1>TSM2832</h1> <h2>20V N-Channel Enhancement Mode MOSFET</h2>																																					
 <p>SOT-89</p> <p>Pin assignment:</p> <ol style="list-style-type: none"> 1. Gate 2. Drain 3. Source 	<p>V_{DS} = 20V</p> <p>R_{DS (on)}, V_{GS} @ 4.5V, I_{DS} @ 3.6A = 60mΩ</p> <p>R_{DS (on)}, V_{GS} @ 2.5V, I_{DS} @ 3.1A = 90mΩ</p>																																					
<h3>Features</h3> <ul style="list-style-type: none"> Advanced trench process technology High density cell design for ultra low on-resistance Excellent thermal and electrical capabilities 2.5V operating voltage 																																						
<h3>Block Diagram</h3> 	<h3>Ordering Information</h3> <table border="1" data-bbox="849 947 1433 1077"> <thead> <tr> <th>Part No.</th> <th>Packing</th> <th>Package</th> </tr> </thead> <tbody> <tr> <td>TSM2832CY</td> <td>Tape & Reel 1kpcs per reel</td> <td>SOT-89</td> </tr> </tbody> </table>			Part No.	Packing	Package	TSM2832CY	Tape & Reel 1kpcs per reel	SOT-89																													
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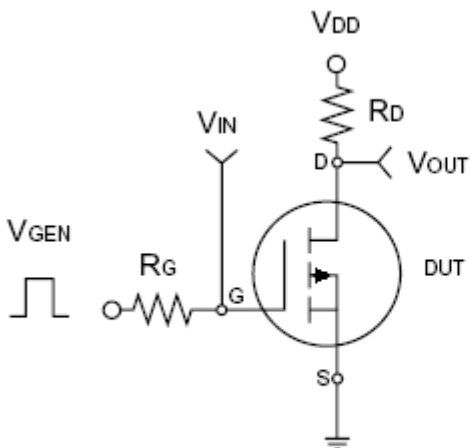
Note: Surface mounted on FR4 board t<=5sec.



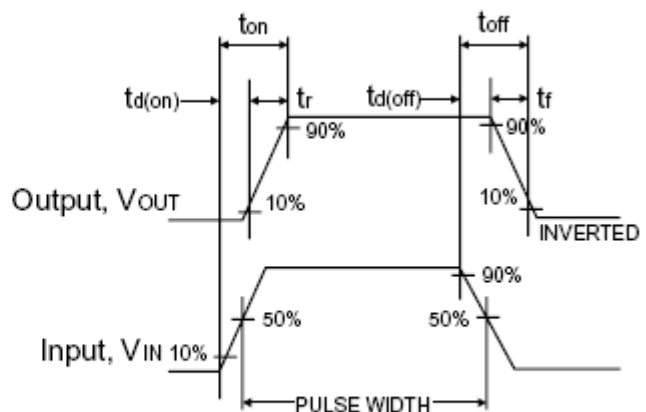


Electrical Characteristics						
Rate $I_D = 2.4A$, ($T_a = 25^\circ C$ unless otherwise noted)						
Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = 250\mu A$	BV_{DSS}	20	--	--	V
Drain-Source On-State Resistance	$V_{GS} = 4.5V, I_D = 3.6A$	$R_{DS(ON)}$	--	50	60	m Ω
Drain-Source On-State Resistance	$V_{GS} = 2.5V, I_D = 3.1A$	$R_{DS(ON)}$	--	75	90	
Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250\mu A$	$V_{GS(TH)}$	0.45	--	--	V
Zero Gate Voltage Drain Current	$V_{DS} = 20V, V_{GS} = 0V$	I_{DSS}	--	--	1.0	μA
Gate Body Leakage	$V_{GS} = \pm 8V, V_{DS} = 0V$	I_{GSS}	--	--	± 100	nA
On-State Drain Current	$V_{DS} \geq 5V, V_{GS} = 4.5V$	$I_{D(ON)}$	6	--	--	A
Forward Transconductance	$V_{DS} = 5V, I_D = 3.6A$	g_{fs}	--	10	--	S
Dynamic						
Total Gate Charge	$V_{DS} = 10V, I_D = 3.6A,$ $V_{GS} = 4.5V$	Q_g	--	5.2	10	nC
Gate-Source Charge		Q_{gs}	--	0.65	--	
Gate-Drain Charge		Q_{gd}	--	1.5	--	
Turn-On Delay Time	$V_{DD} = 10V, R_L = 10\Omega,$ $I_D = 1A, V_{GEN} = 4.5V,$ $R_G = 6\Omega$	$t_{d(on)}$	--	7	15	nS
Turn-On Rise Time		t_r	--	55	80	
Turn-Off Delay Time		$t_{d(off)}$	--	16	60	
Turn-Off Fall Time		t_f	--	10	25	
Input Capacitance	$V_{DS} = 10V, V_{GS} = 0V,$ $f = 1.0MHz$	C_{iss}	--	450	--	pF
Output Capacitance		C_{oss}	--	70	--	
Reverse Transfer Capacitance		C_{rss}	--	43	--	
Source-Drain Diode						
Max. Diode Forward Current		I_S	--	--	1.6	A
Diode Forward Voltage	$I_S = 1.0A, V_{GS} = 0V$	V_{SD}	--	0.75	1.2	V

Note : pulse test: pulse width $\leq 300\mu S$, duty cycle $\leq 2\%$



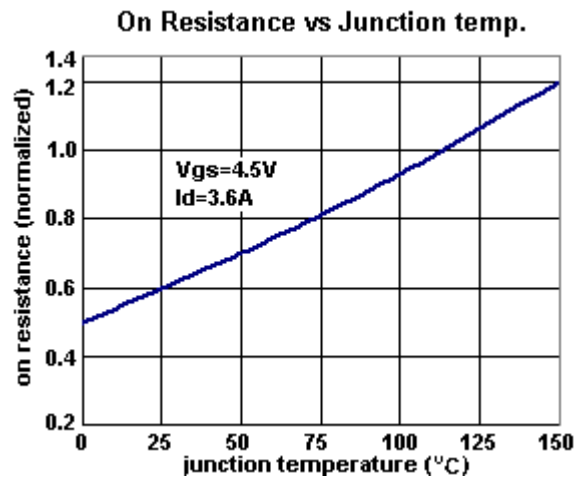
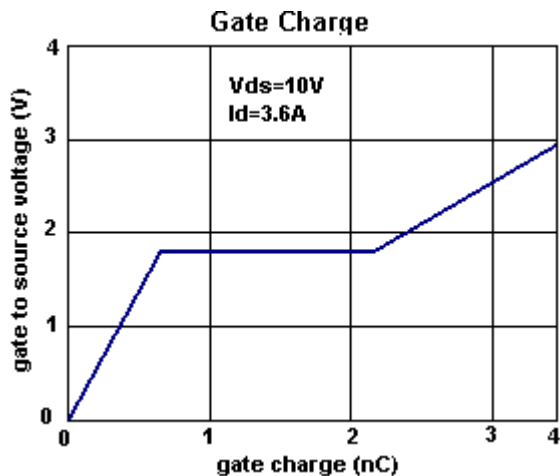
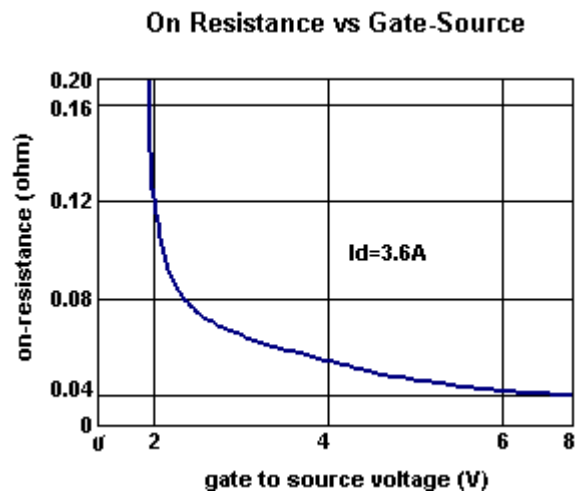
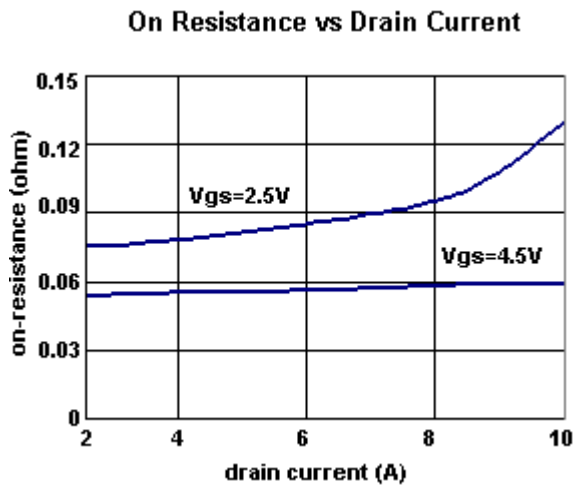
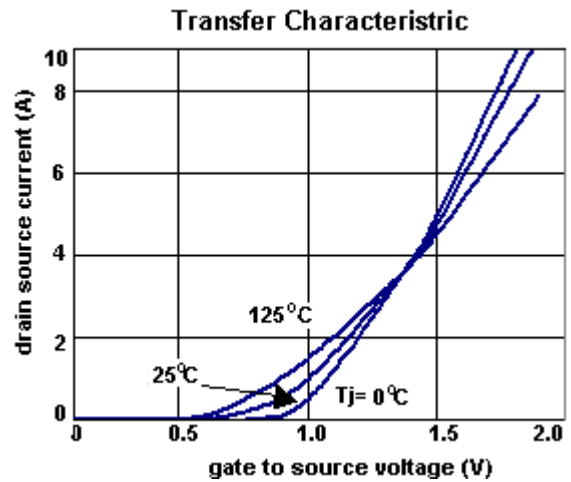
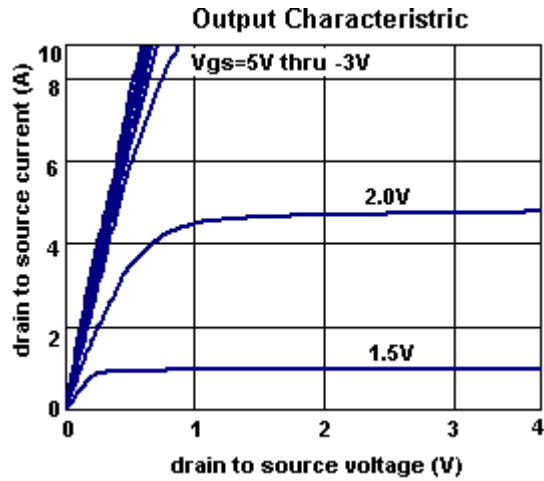
Switching Test Circuit



Switchin Waveforms

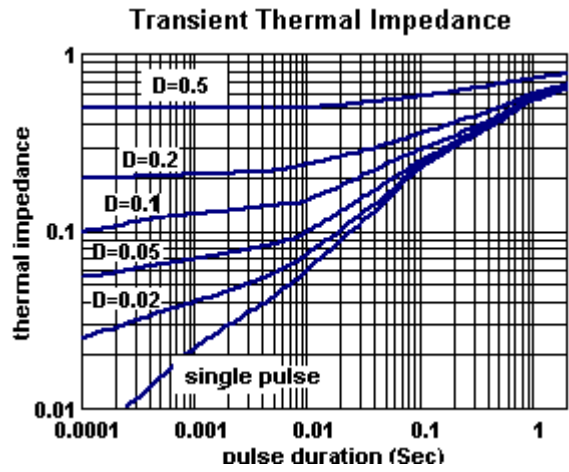
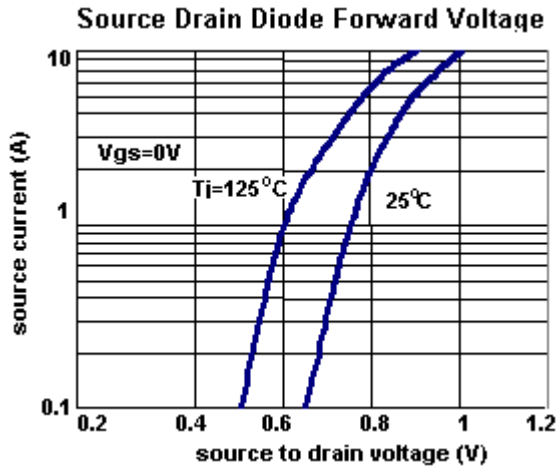


Typical Characteristics Curve (Ta = 25 °C unless otherwise noted)

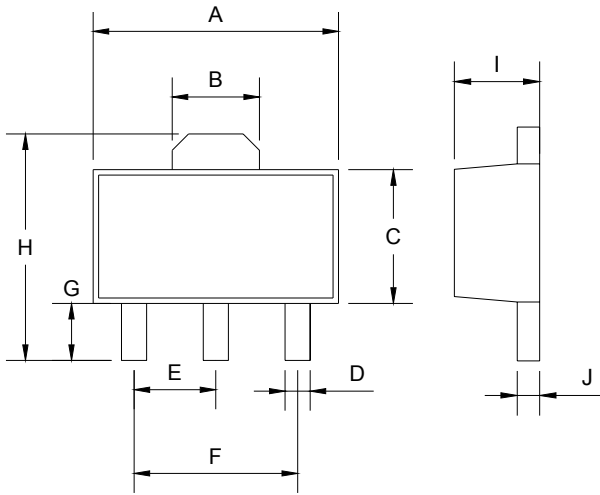




Typical Characteristics Curve (Ta = 25°C unless otherwise noted)



SOT-89 Mechanical Drawing



DIM	SOT-89 DIMENSION			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.40	4.60	0.173	0.181
B	1.50	1.7	0.059	0.070
C	2.30	2.60	0.090	0.102
D	0.40	0.52	0.016	0.020
E	1.50	1.50	0.059	0.059
F	3.00	3.00	0.118	0.118
G	0.89	1.20	0.035	0.047
H	4.05	4.25	0.159	0.167
I	1.4	1.6	0.055	0.068
J	0.35	0.44	0.014	0.017