

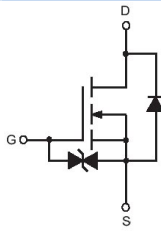
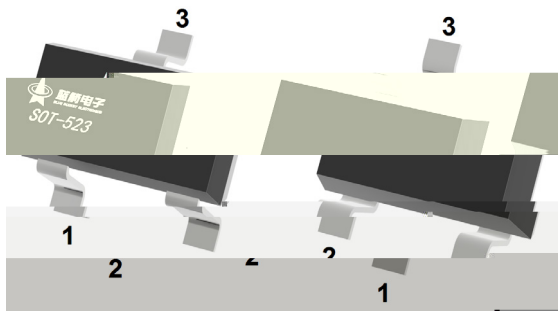
/ Descriptions

SOT-523 N MOS

N-CHANNEL MOSFET in a SOT-523 Plastic Package.

/ Features**/ Applications**

Load Switching, Low Current Inverters, Low Current DC/DC Converters.

/ Equivalent Circuit**/ Pinning**

PIN1 G

PIN 2 S

PIN 3 D

/ Marking

See Marking Instructions.

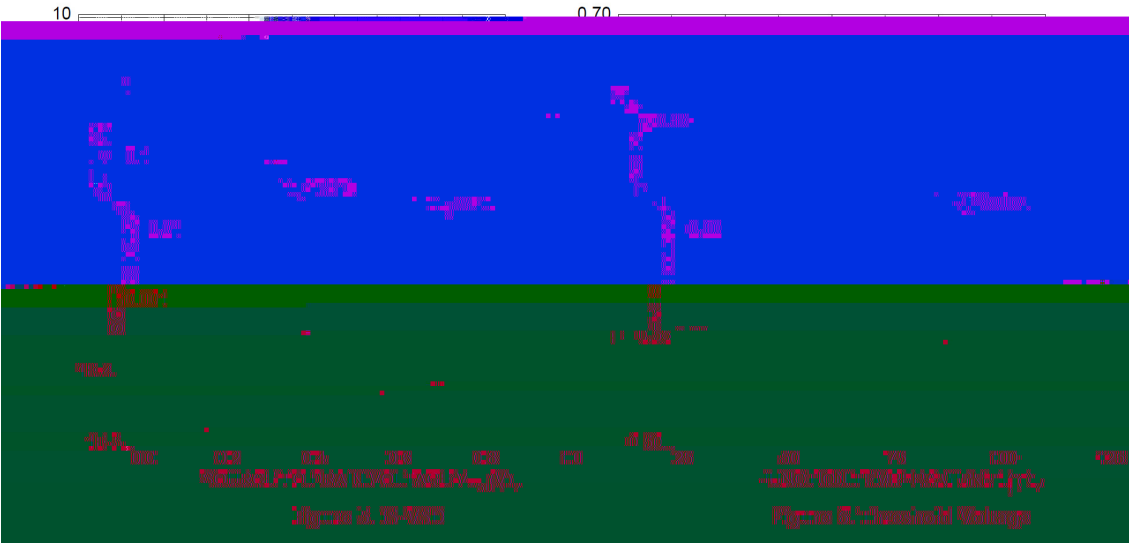
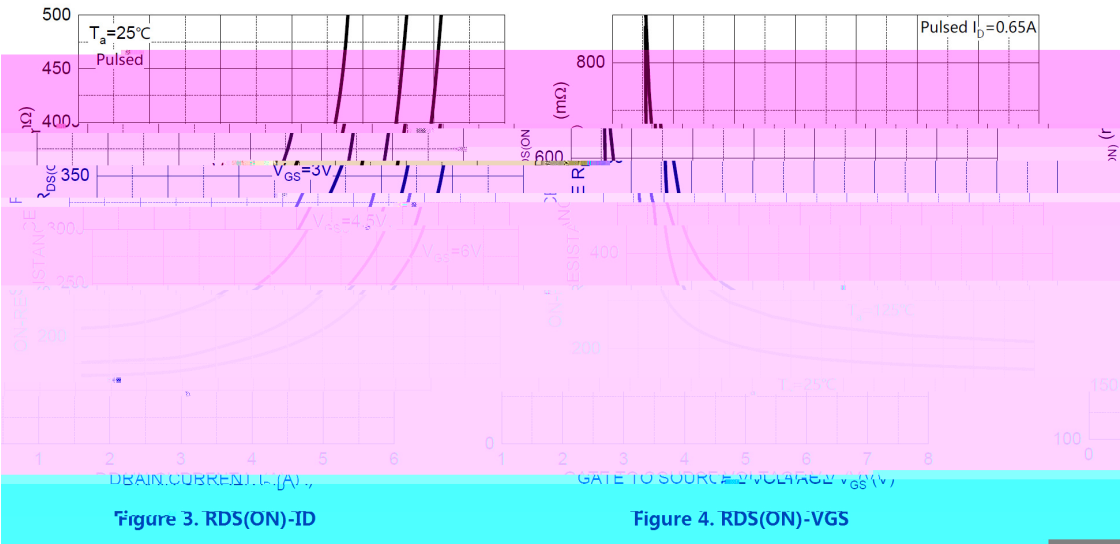
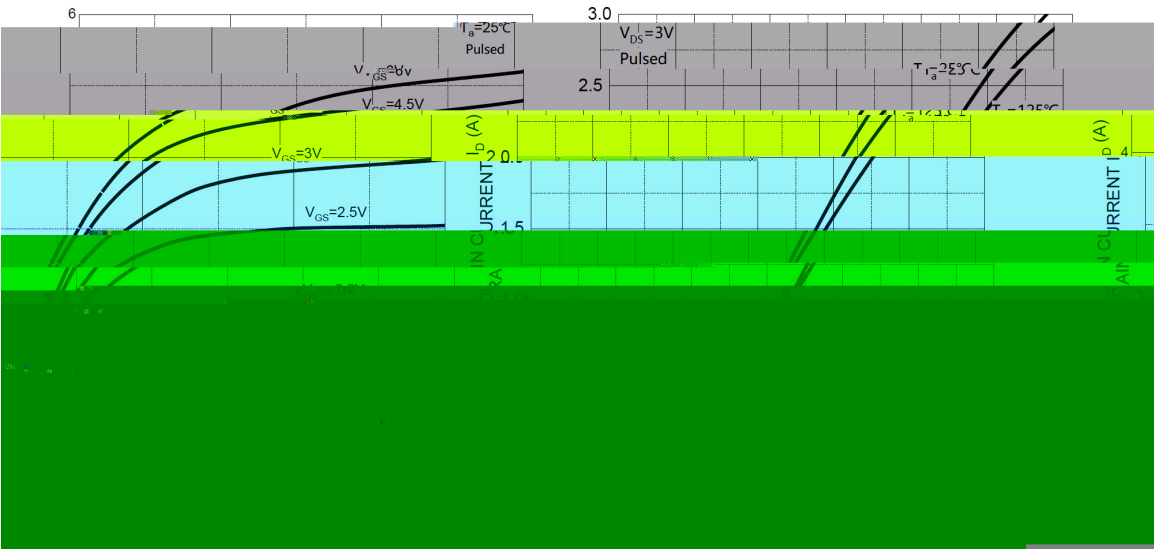
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	12	V
Drain Current	I_D	0.75	A
Drain Current – Pulsed	I_{DM}	3.0	A
Power Dissipation	P_D	0.15	
Junction Temperature Range		150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance from Junction to Ambient		833	

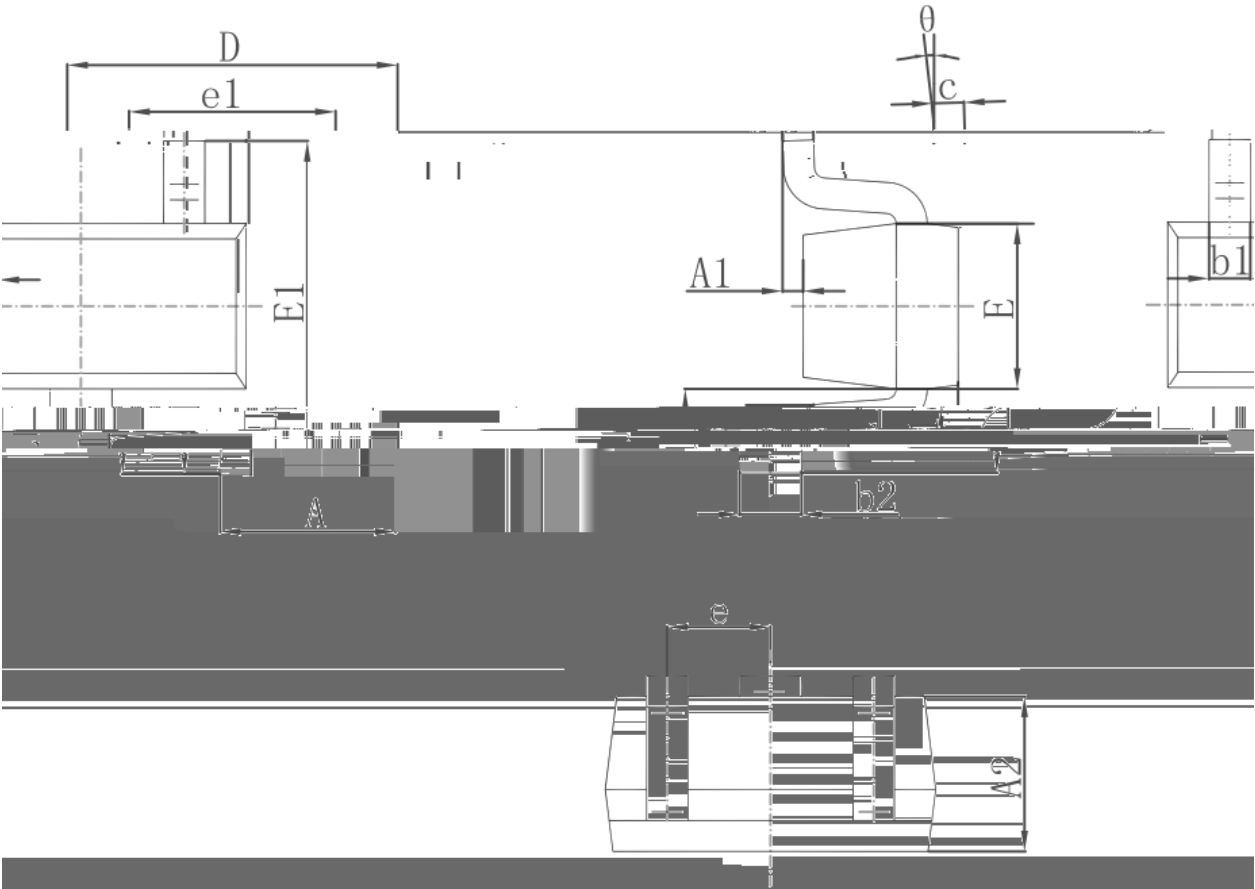
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	V_{DSS}	$V_{GS}=0$ $I_D=250\mu A$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS}=0$ $V_{DS}=20V$			1	μA
Gate–Body Leakage	I_{GSS}	$V_{DS}=0V$ $V_{GS}=\pm 10V$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	0.4	0.7	1.0	V
Static Drain-Source On-Resistance	$R_{DS(on)(1)}$	$V_{GS}=4.5V$ $I_D=650mA$		170	380	m Ω
	$R_{DS(on)(2)}$	$V_{GS}=2.5V$ $I_D=550mA$		230	450	m Ω
	$R_{DS(on)(3)}$	$V_{GS}=1.8V$ $I_D=450mA$		330	590	m Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=150mA$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=10V$ $V_{GS}=0V$ $f=1.0MHz$		55		pF
Output Capacitance	C_{oss}			15		
Reverse Transfer Capacitance	C_{rss}			10		
Total Gate Charge	Q_g	$V_{GS}=4.5V$ $V_{DS}=10V$, $I_D=0.65A$		0.8		nC
Gate Source Charge	Q_{gs}			0.2		
Gate Drain Charge	Q_{gd}			0.01		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=4.5V$ $V_{DS}=10V$ $I_D=0.5A$ $R_{GEN}=10\Omega$		6.7		ns
Turn-On Rise Time	t_r			4.8		
Turn-Off Delay Time	$t_{d(off)}$			17.3		
Turn-Off Fall Time	t_f			7.4		

/ Electrical Characteristic Curve



/ Package Dimensions

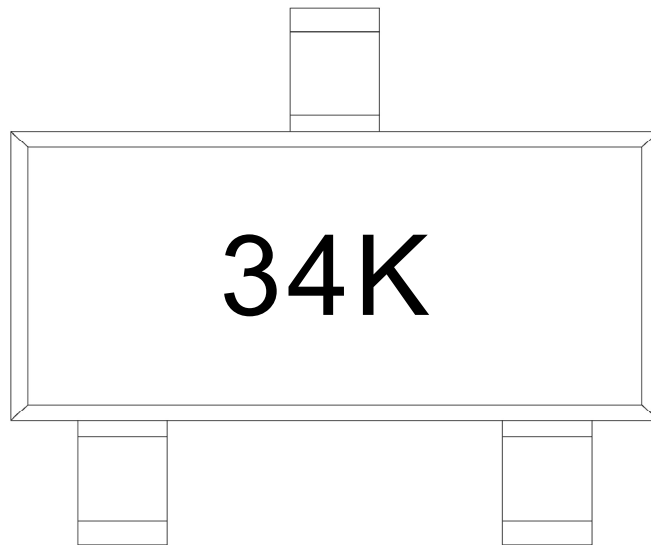


Dimensions In Inches	
Min.	Max.
0.028	0.035
0.000	0.004
0.028	0.031

Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800

0.028	0.031	0.035	0.043	0.057	0.069	0.071	0.083	0.095	0.107	0.119	0.131	0.143	0.155	0.167	0.179	0.191	0.203	0.215	0.227	0.239	0.251	0.263	0.275	0.287	0.299	0.311	0.323	0.335	0.347	0.359	0.371	0.383	0.395	0.407	0.419	0.431	0.443	0.455	0.467	0.479	0.491	0.503	0.515	0.527	0.539	0.551	0.563	0.575	0.587	0.599	0.611	0.623	0.635	0.647	0.659	0.671	0.683	0.695	0.707	0.719	0.731	0.743	0.755	0.767	0.779	0.791	0.803	0.815	0.827	0.839	0.851	0.863	0.875	0.887	0.899	0.911	0.923	0.935	0.947	0.959	0.971	0.983	0.995	1.007	1.019	1.031	1.043	1.055	1.067	1.079	1.091	1.103	1.115	1.127	1.139	1.151	1.163	1.175	1.187	1.199	1.211	1.223	1.235	1.247	1.259	1.271	1.283	1.295	1.307	1.319	1.331	1.343	1.355	1.367	1.379	1.391	1.403	1.415	1.427	1.439	1.451	1.463	1.475	1.487	1.499	1.511	1.523	1.535	1.547	1.559	1.571	1.583	1.595	1.607	1.619	1.631	1.643	1.655	1.667	1.679	1.691	1.703	1.715	1.727	1.739	1.751	1.763	1.775	1.787	1.799	1.811	1.823	1.835	1.847	1.859	1.871	1.883	1.895	1.907	1.919	1.931	1.943	1.955	1.967	1.979	1.991	2.003	2.015	2.027	2.039	2.051	2.063	2.075	2.087	2.099	2.111	2.123	2.135	2.147	2.159	2.171	2.183	2.195	2.207	2.219	2.231	2.243	2.255	2.267	2.279	2.291	2.303	2.315	2.327	2.339	2.351	2.363	2.375	2.387	2.399	2.411	2.423	2.435	2.447	2.459	2.471	2.483	2.495	2.507	2.519	2.531	2.543	2.555	2.567	2.579	2.591	2.603	2.615	2.627	2.639	2.651	2.663	2.675	2.687	2.699	2.711	2.723	2.735	2.747	2.759	2.771	2.783	2.795	2.807	2.819	2.831	2.843	2.855	2.867	2.879	2.891	2.903	2.915	2.927	2.939	2.951	2.963	2.975	2.987	2.999	3.011	3.023	3.035	3.047	3.059	3.071	3.083	3.095	3.107	3.119	3.131	3.143	3.155	3.167	3.179	3.191	3.203	3.215	3.227	3.239	3.251	3.263	3.275	3.287	3.299	3.311	3.323	3.335	3.347	3.359	3.371	3.383	3.395	3.407	3.419	3.431	3.443	3.455	3.467	3.479	3.491	3.503	3.515	3.527	3.539	3.551	3.563	3.575	3.587	3.599	3.611	3.623	3.635	3.647	3.659	3.671	3.683	3.695	3.707	3.719	3.731	3.743	3.755	3.767	3.779	3.791	3.803	3.815	3.827	3.839	3.851	3.863	3.875	3.887	3.899	3.911	3.923	3.935	3.947	3.959	3.971	3.983	3.995	4.007	4.019	4.031	4.043	4.055	4.067	4.079	4.091	4.103	4.115	4.127	4.139	4.151	4.163	4.175	4.187	4.199	4.211	4.223	4.235	4.247	4.259	4.271	4.283	4.295	4.307	4.319	4.331	4.343	4.355	4.367	4.379	4.391	4.403	4.415	4.427	4.439	4.451	4.463	4.475	4.487	4.499	4.511	4.523	4.535	4.547	4.559	4.571	4.583	4.595	4.607	4.619	4.631	4.643	4.655	4.667	4.679	4.691	4.703	4.715	4.727	4.739	4.751	4.763	4.775	4.787	4.799	4.811	4.823	4.835	4.847	4.859	4.871	4.883	4.895	4.907	4.919	4.931	4.943	4.955	4.967	4.979	4.991	5.003	5.015	5.027	5.039	5.051	5.063	5.075	5.087	5.099	5.111	5.123	5.135	5.147	5.159	5.171	5.183	5.195	5.207	5.219	5.231	5.243	5.255	5.267	5.279	5.291	5.303	5.315	5.327	5.339	5.351	5.363	5.375	5.387	5.399	5.411	5.423	5.435	5.447	5.459	5.471	5.483	5.495	5.507	5.519	5.531	5.543	5.555	5.567	5.579	5.591	5.603	5.615	5.627	5.639	5.651	5.663	5.675	5.687	5.699	5.711	5.723	5.735	5.747	5.759	5.771	5.783	5.795	5.807	5.819	5.831	5.843	5.855	5.867	5.879	5.891	5.903	5.915	5.927	5.939	5.951	5.963	5.975	5.987	5.999	6.011	6.023	6.035	6.047	6.059	6.071	6.083	6.095	6.107	6.119	6.131	6.143	6.155	6.167	6.179	6.191	6.203	6.215	6.227	6.239	6.251	6.263	6.275	6.287	6.299	6.311	6.323	6.335	6.347	6.359	6.371	6.383	6.395	6.407	6.419	6.431	6.443	6.455	6.467	6.479	6.491	6.503	6.515	6.527	6.539	6.551	6.563	6.575	6.587	6.599	6.611	6.623	6.635	6.647	6.659	6.671	6.683	6.695	6.707	6.719	6.731	6.743	6.755	6.767	6.779	6.791	6.803	6.815	6.827	6.839	6.851	6.863	6.875	6.887	6.899	6.911	6.923	6.935	6.947	6.959	6.971	6.983	6.995	7.007	7.019	7.031	7.043	7.055	7.067	7.079	7.091	7.103	7.115	7.127	7.139	7.151	7.163	7.175	7.187	7.199	7.211	7.223	7.235	7.247	7.259	7.271	7.283	7.295	7.307	7.319	7.331	7.343	7.355	7.367	7.379	7.391	7.403	7.415	7.427	7.439	7.451	7.463	7.475	7.487	7.499	7.511	7.523	7.535	7.547	7.559	7.571	7.583	7.595	7.607	7.619	7.631	7.643	7.655	7.667	7.679	7.691	7.703	7.715	7.727	7.739	7.751	7.763	7.775	7.787	7.799	7.811	7.823	7.835	7.847	7.859	7.871	7.883	7.895	7.907	7.919	7.931	7.943	7.955	7.967	7.979	7.991	8.003	8.015	8.027	8.039	8.051	8.063	8.075	8.087	8.099	8.111	8.123	8.135	8.147	8.159	8.171	8.183	8.195	8.207	8.219	8.231	8.243	8.255	8.267	8.279	8.291	8.303	8.315	8.327	8.339	8.351	8.363	8.375	8.387	8.399	8.411	8.423	8.435	8.447	8.459	8.471	8.483	8.495	8.507	8.519	8.531	8.543	8.555	8.567	8.579	8.591	8.603	8.615	8.627	8.639	8.651	8.663	8.675	8.687	8.699	8.711	8.723	8.735	8.747	8.759	8.771	8.783	8.795	8.807	8.819	8.831	8.843	8.855	8.867	8.879	8.891	8.903	8.915	8.927	8.939	8.951	8.963	8.975	8.987	8.999	9.011	9.023	9.035	9.047	9.059	9.071	9.083	9.095	9.107	9.119	9.131	9.143	9.155	9.167	9.179	9.191	9.203	9.215	9.227	9.239	9.251	9.263	9.275	9.287	9.299	9.311	9.323	9.335	9.347	9.359	9.371	9.383	9.395	9.407	9.419	9.431	9.443	9.455	9.467	9.479	9.491	9.503	9.515	9.527	9.539	9.551	9.563	9.575	9.587	9.599	9.611	9.623	9.635	9.647	9.659	9.671	9.683	9.695	9.707	9.719	9.731	9.743	9.755	9.767	9.779	9.791	9.803	9.815	9.827	9.839	9.851	9.863	9.875	9.887	9.899	9.911	9.923	9.935	9.947	9.959	9.971	9.983	9.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/ Marking Instructions



34K

Note:

34K: Product Type Code

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- Note:

1 150 180 60 90sec; 1.Preheating:150~180 , Time:60~90sec.

2 245 5 5 0.5sec; 2.Peak Temp.:245 5 , Duration:5 0.5sec.

3 2 10 /sec. 3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units	Dimension	(unit mm ³)