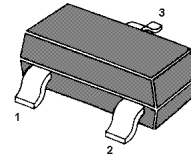
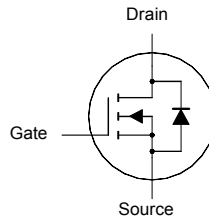


MMBT7002 N-Channel Enhancement Mode Field Effect Transistor

Features

- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switching
- High saturation current capability
- High speed switching

MARKING: 7002



1.Gate 2.Source 3.Drain
SOT-23 Plastic Package

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

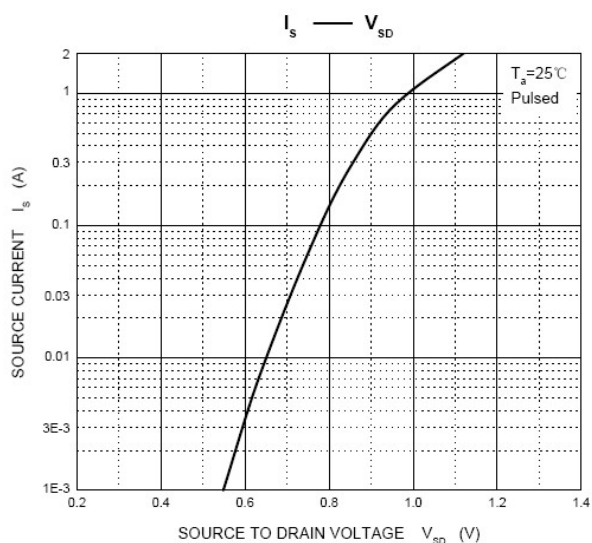
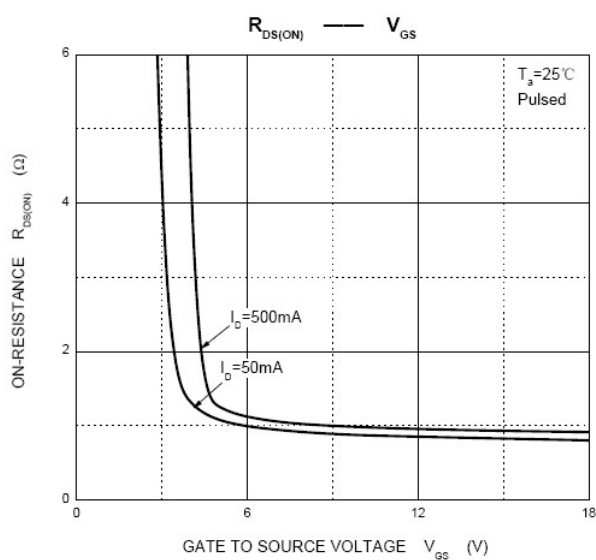
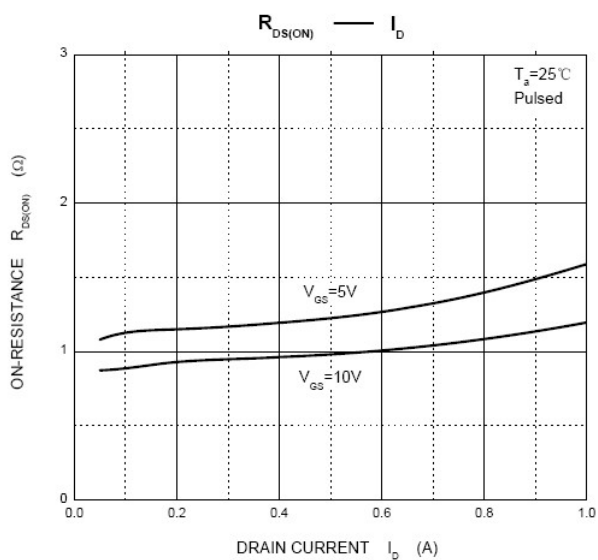
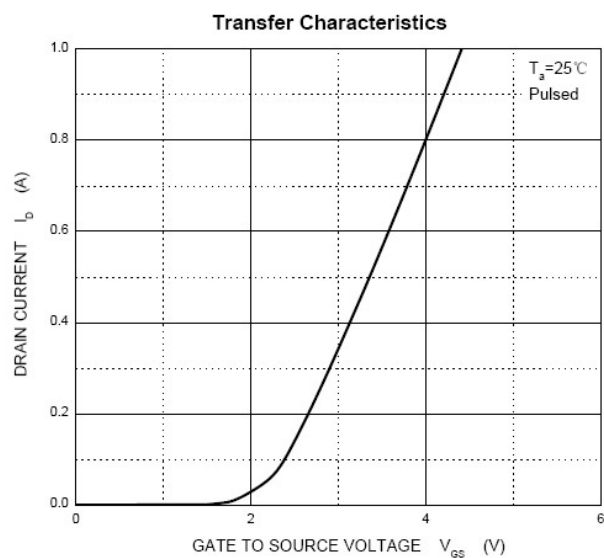
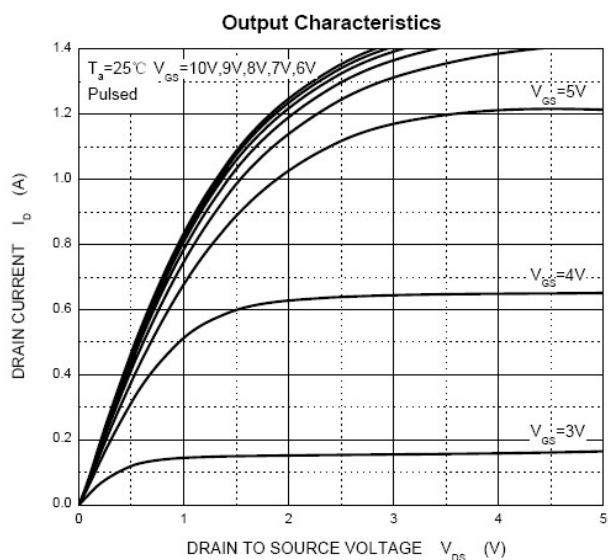
Parameters	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	115	mA
Power Dissipation	P_D	225	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	556	°C/W

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=250uA	60		V
Gate-Threshold voltage	VGS(th)	VDS=VGS, ID=250uA	1	2.5	V
Gate-body Leakage	IGSS	VDS=0V, VGS=±20V		±80	nA
Zero Gate Voltage Drain current	IDSS	VDS=60V, VGS=0V		80	nA
On-state Drain current	ID(ON)	VGS=10V, VDS=7V	500		mA
Drain-Source On-Resistance	RDS(ON)	VGS=10V, ID=500mA		5	Ω
		VGS=5V, ID=50mA		7	
Forward Trans conductance	gfs	VDS=10V, ID=200mA	80		ms
Drain-source on-voltage	VDS(ON)	VGS=10V, ID=500mA		3.75	V
		VGS=5V, ID=50mA		0.375	V
Diode Forward voltage	VSD	IS=115mA, VGS=0V	0.55	1.20	V
Input capacitance*	Ciss	Vds=25V, VGS=0V,f=1MHz		50	pF
Output capacitance*	Coss			25	
Reverse Transfer capacitance*	Crss			5	
SWITCHING TIME					
Turn-on Time*	td(on)	VDD=25V, RL=50Ω, ID=500mA, VGEN=10V, RG=25Ω		20	ns
Turn-off Time*	td(off)			40	

* These parameters have on way to verify.

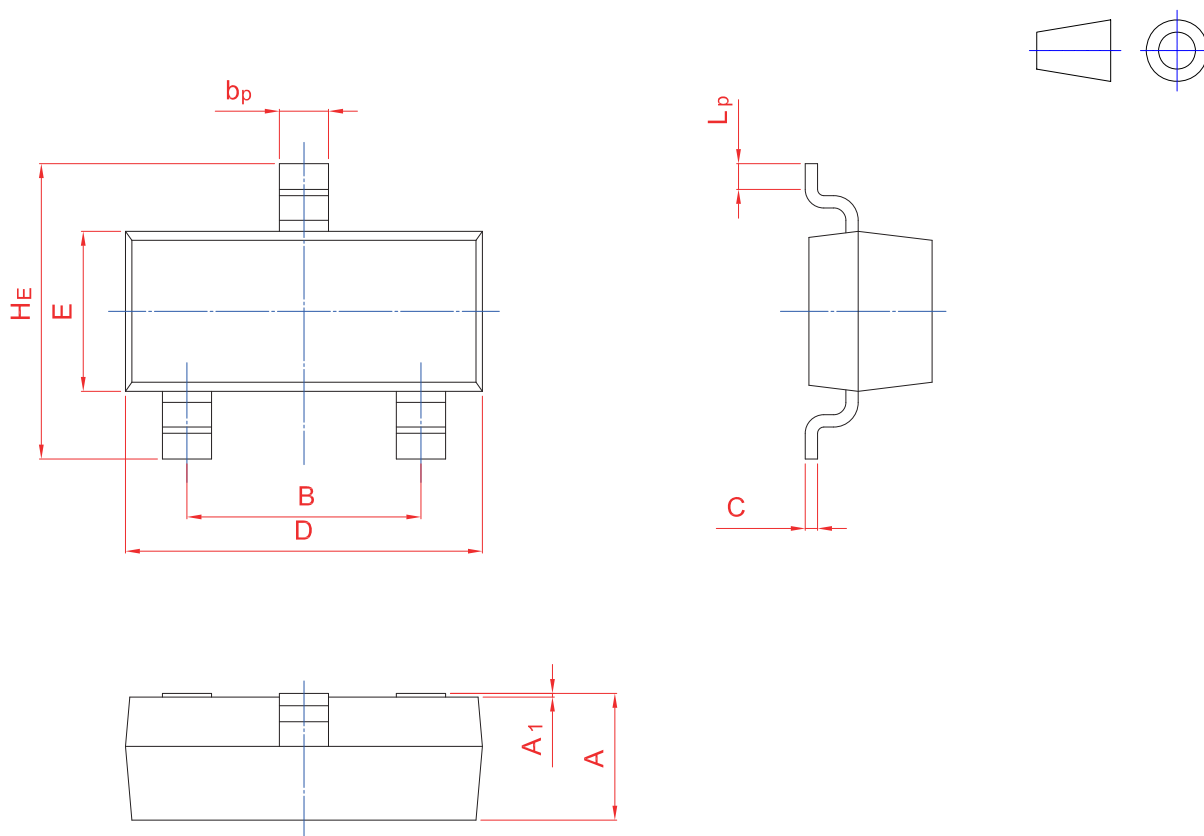
Typical characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40 0.89	2.04 1.78	0.51 0.30	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20