



N-Channel Power MOSFET 500mA, 60V

MMBF170L

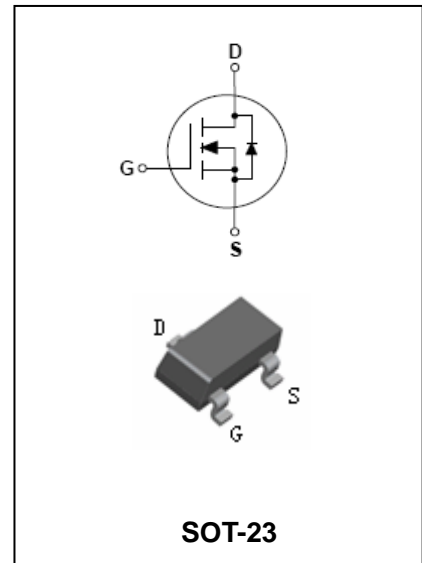
FEATURES

- Power Mosfet 500Ma,60V.
- N-Channel.



APPLICATIONS

- N-channel enhancement mode effect transistor.
- Switching application.



ORDERING INFORMATION

Type No.	Marking	Package Code
MMBF170L	6Z	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{DSS}	Drain-Source voltage	60	V
V _{DGR}	Drain-Gate voltage(R _{GS} ≤1MΩ)	60	V
V _{GSS}	Gate -Source voltage - continuous -Non Repetitive (t _p <50μs)	± 20 ± 40	V
I _D	Maximum Drain current -continuous -Pulsed	0.5 0.8	A
P _D	Power Dissipation	225	mW
R _{θJA}	Thermal resistance,Junction-to-Ambient	556	°C/W
T _J , T _{stg}	Junction and Storage Temperature	-55 to +150	°C



N-Channel Power MOSFET 500mA, 60V

MMBF170L

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=10\mu A$	60	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=1mA$	0.8	-	3.0	
Gate-body Leakage	I_{GSS}	Forward $V_{DS}=0V, V_{GS}=15V$	-	-	10	nA
		Reverse $V_{DS}=0V, V_{GS}=-15V$	-	-	-10	
Static drain-Source on-resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=200mA$	-	-	5	Ω
On-state drain current	$I_{D(off)}$	$V_{GS}=0V, V_{DS}=10V, f=1MHz$	-	-	0.5	μA
Input capacitance	C_{ISS}	$V_{DS}=25V, V_{GS}=0V, f=1.0MHz$	-	-	60	pF
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD} = 25V, I_D = 500mA,$ $R_{GEN} = 25\Omega$	-	-	10	ns
Turn-Off Delay Time	$t_{D(OFF)}$		-	-	10	ns

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

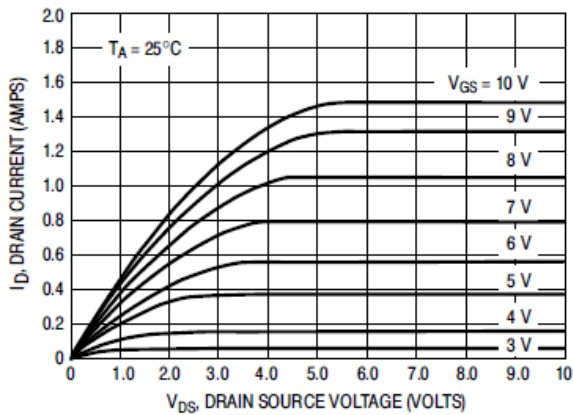


Figure 3. Ohmic Region

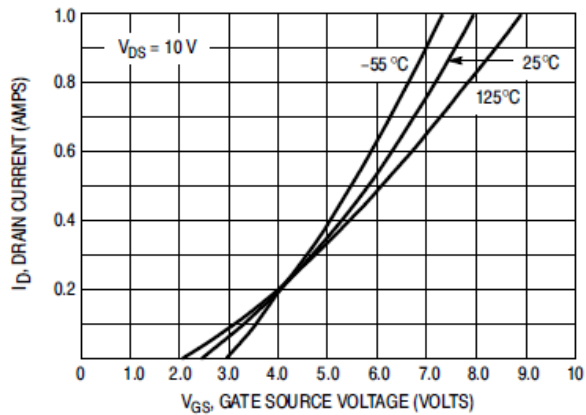


Figure 4. Transfer Characteristics

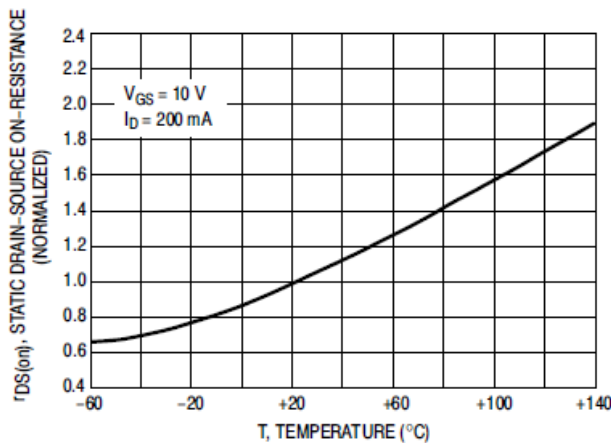


Figure 5. Temperature versus Static Drain-Source On-Resistance

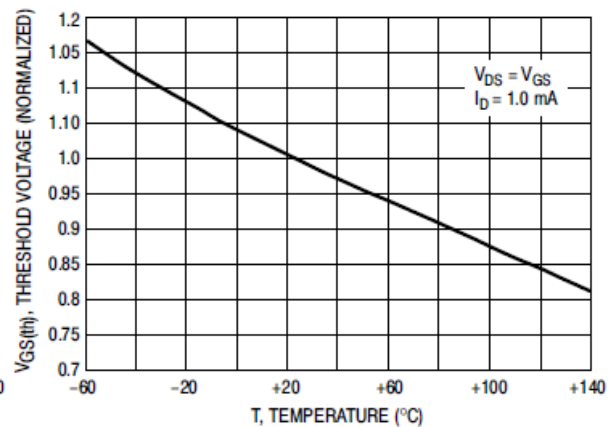


Figure 6. Temperature versus Gate Threshold Voltage



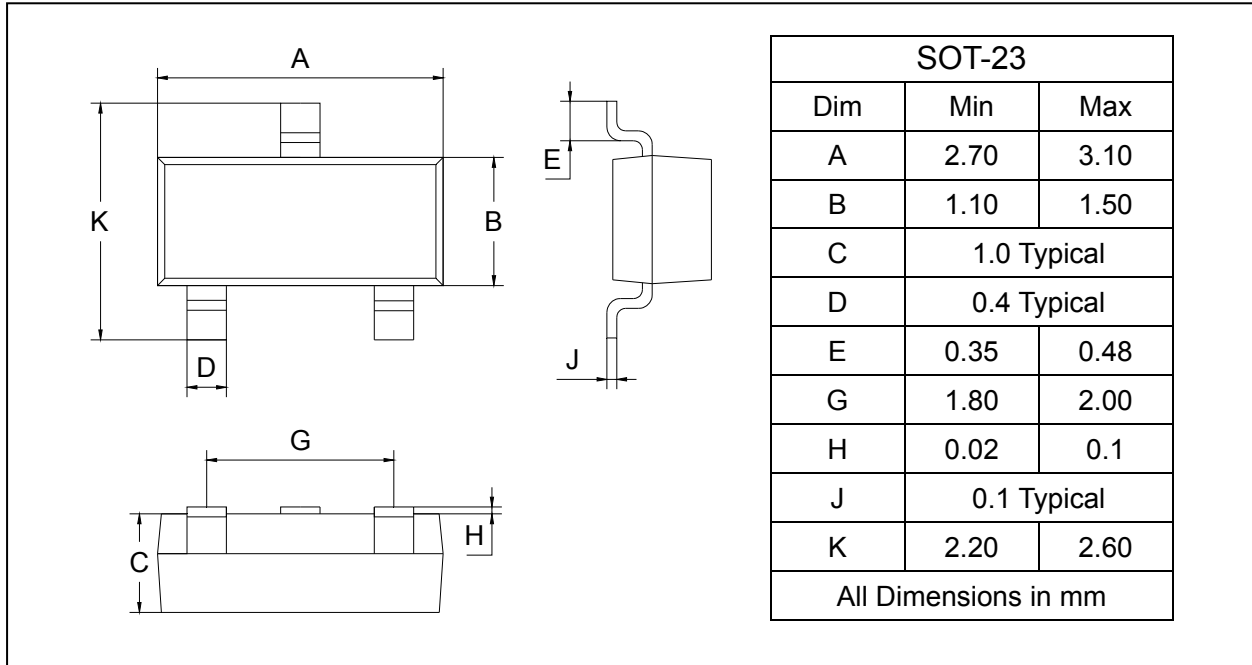
N-Channel Power MOSFET 500mA, 60V

MMBF170L

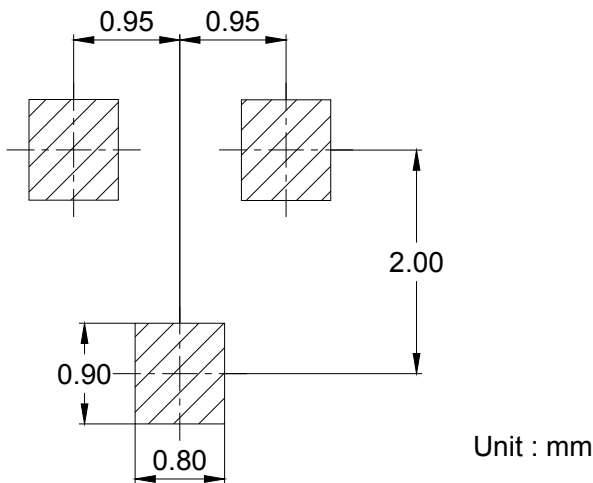
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMBF170L	SOT-23	3000/Tape&Reel