MMBD1203 SWITCHING DIODES
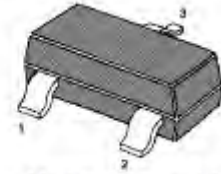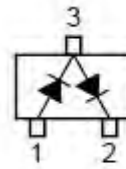
FEATURES

Fast Switching Speed
For General Purpose Switching Applications
High Conductance

Marking Code: A7
SOT-23 Plastic Package

Absolute Maximum Ratings (T$_a$ = 25 ^{o}C)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V$_{RRM}$	85	V
Continuous Reverse Voltage	V$_R$	75	V
Continuous Forward Current (Double Diode Loaded)	I$_F$	125	mA
Continuous Forward Current (Single Diode Loaded)	I$_F$	215	mA
Repetitive Peak Forward Current	I$_{FRM}$	450	mA
Non-repetitive Peak Forward Surge Current at t = 1 s at t = 1 ms at t = 1 μs	I$_{FSM}$	0.5 1 4.5	A
Power Dissipation	P$_{tot}$	350	mW
Junction Temperature	T$_j$	150	^{o}C
Storage Temperature Range	T$_{stg}$	- 65 to + 150	^{o}C

Characteristics at T$_a$ = 25 ^{o}C

Parameter	Symbol	Max.	Unit
Forward Voltage at I$_F$ = 1 mA at I$_F$ = 10 mA at I$_F$ = 50 mA at I$_F$ = 150 mA	V$_F$	0.715 0.855 1 1.25	V
Reverse Current at V$_R$ = 25 V at V$_R$ = 75 V at V$_R$ = 25 V, T$_j$ = 150 ^{o}C at V$_R$ = 75 V, T$_j$ = 150 ^{o}C	I$_R$	30 1 30 50	nA μA μA μA
Diode Capacitance at V$_R$ = 0 , f = 1 MHz	C$_d$	1.5	pF
Reverse Recovery Time at I$_F$ = I$_R$ = 10 mA, I$_R$ = 1 mA, R$_L$ = 100 Ω	t$_{rr}$	4	ns

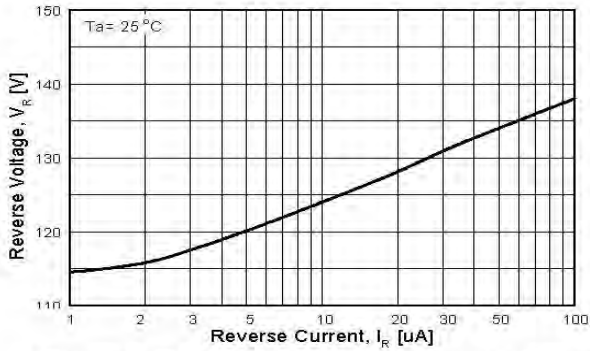# Typical Characteristics

Figure 1. Reverse Voltage vs Reverse Current
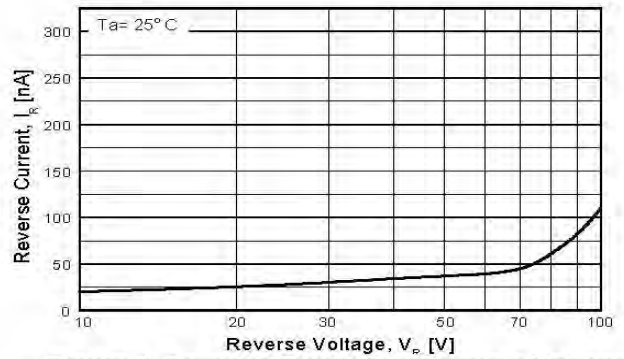BV - 1.0 to 100uA

Figure 2. Reverse Current vs Reverse Voltage
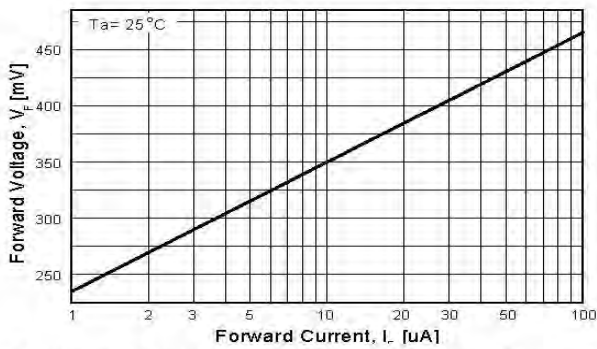IR - 10 to 100 V

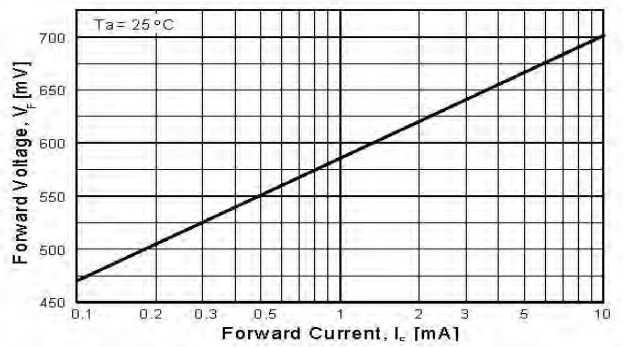Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

Figure 4. Forward Voltage vs Forward Current
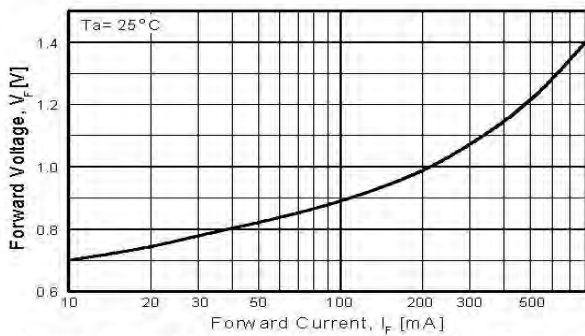VF - 0.1 to 10 mA

Figure 5. Forward Voltage vs Forward Current
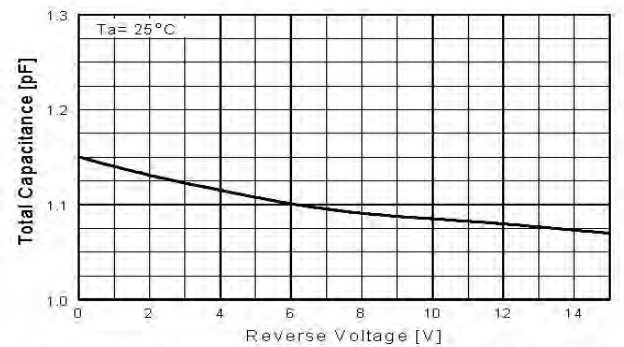VF - 10 - 800 mA
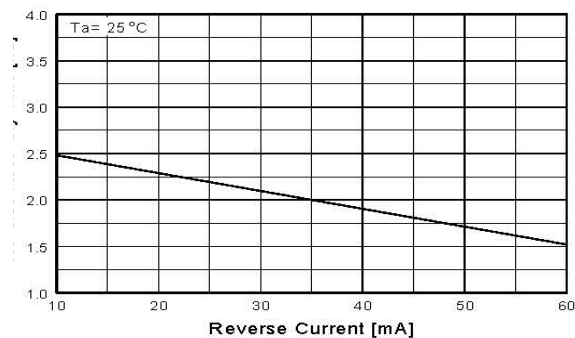

Figure 6. Total Capacitance vs Reverse Voltage

Figure 7. Reverse Recovery Time
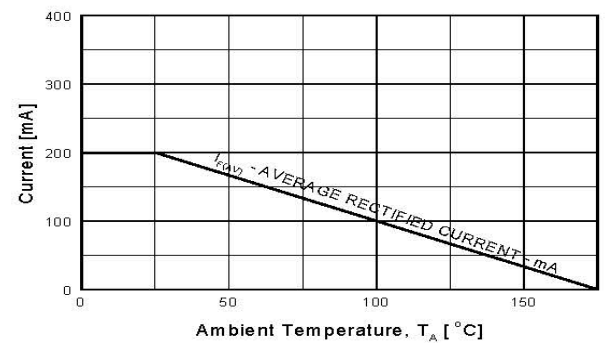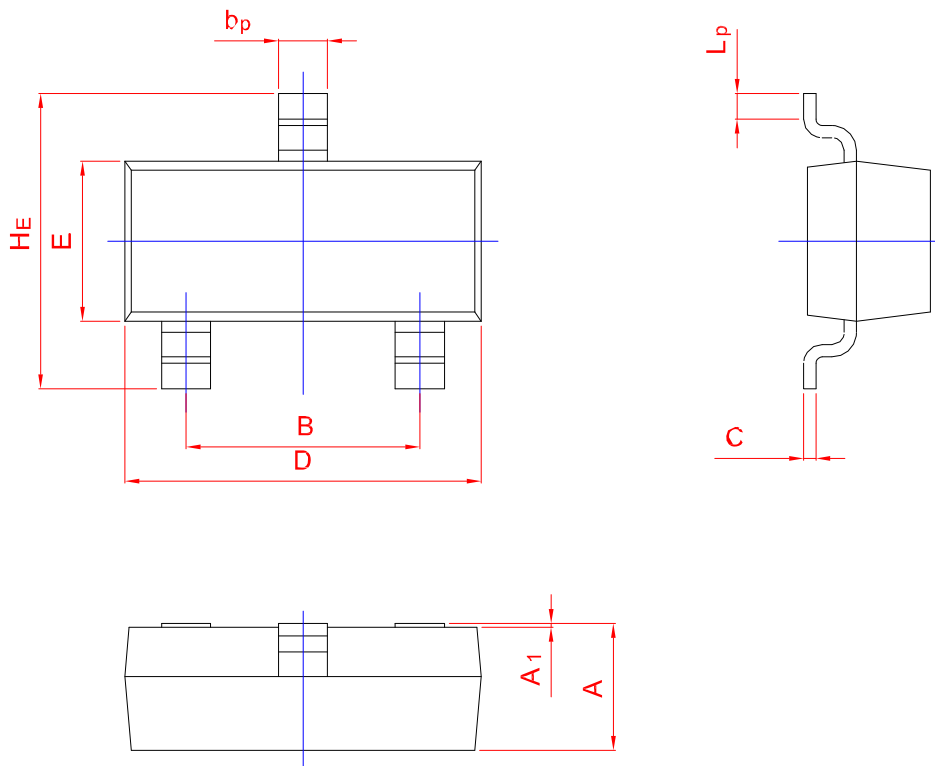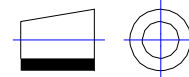vs Reverse Current
TRR - IR 10 mA vs 60 mA

Figure 8. Average Rectified Current ($I_{F(AV)}$)
versus Ambient Temperature (T_A)

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads   **SOT-23**

UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20