DESCRIPTION

The FMMT491 is available in SOT-23 package.

FEATURES

- NPN Transistor
- Low Equivalent on-resistance.

ORDERING INFORMATION

Package Type	Part Number
SOT-23	FMMT491
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION :

Pin #	Description
1	Base
2	Emitter
3	Collector

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified

V_{CBO}, Collector-Base Voltage	40V
V_{CEO}, Collector-Emitter Voltage	25V
V_{EBO}, Emitter-Base Voltage	5V
I_C, Collector Current -Continuous	1A
P_C, Collector Power Dissipation	0.30W
T_j, Junction Temperature	150℃
T_{stg}, Storage Temperature	-55℃ ~ + 150℃

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C= 100μA, I_E=0	40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C= 100μA, I_B=0	25	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E= 100μA, I_C=0	5	-	-	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=40V, I_E=0	-	-	0.1	μA
	I_{CEO}	V_{CB}=20V, I_E=0	-	-	0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V, I_E=0	-	-	0.1	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=1V, I_C= 100mA	200	-	350	-
	$h_{FE(2)}$	V_{CE}=1V, I_C= 800mA	40	-	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=800mA, I_B= 80mA	-	-	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=800mA, I_B= 80mA	-	-	1.2	V
Transition Frequency	f_T	V_{CE}=10V, I_C= 50mA f=30MHz	100	-	-	MHz

TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Typical Output Characteristics

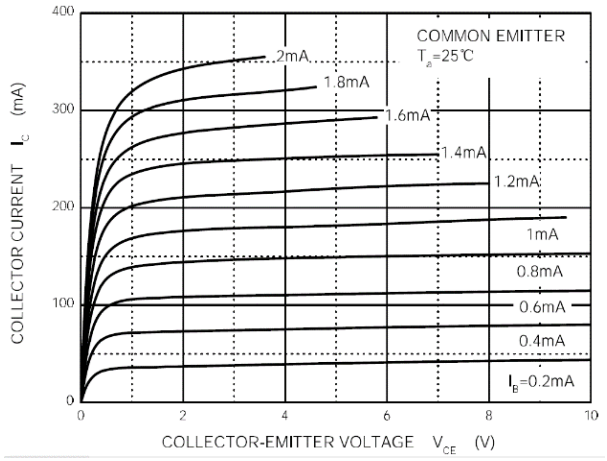


Fig2. DC Current Gain vs. Collector Current

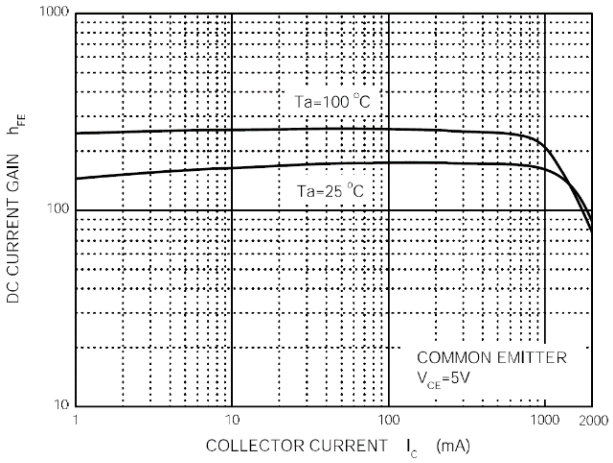


Fig 3. Collector-Emitter Saturation Voltage vs. Collector Current

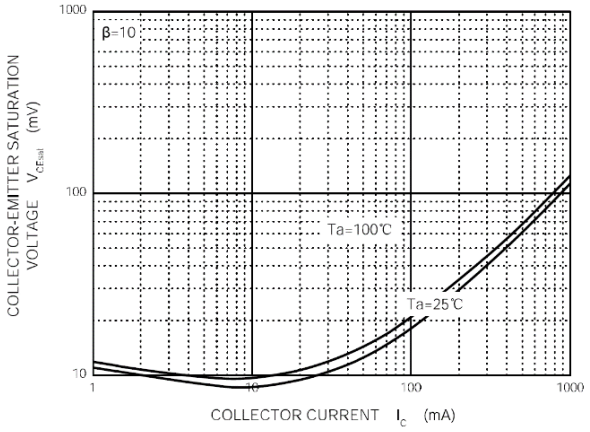


Fig 4. Base-Emitter Saturation Voltage vs. Collector Current

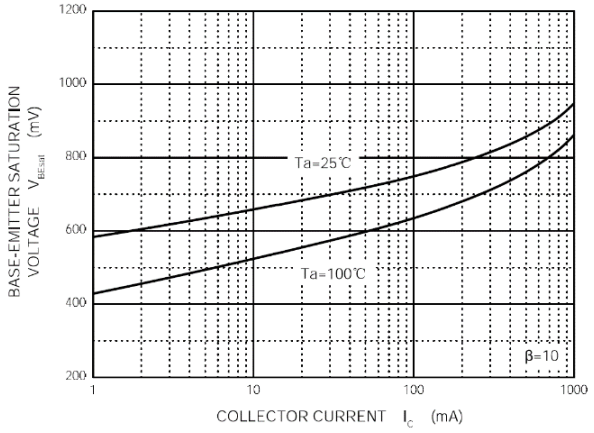


Fig 5. Ground Emitter Propagation Characteristics

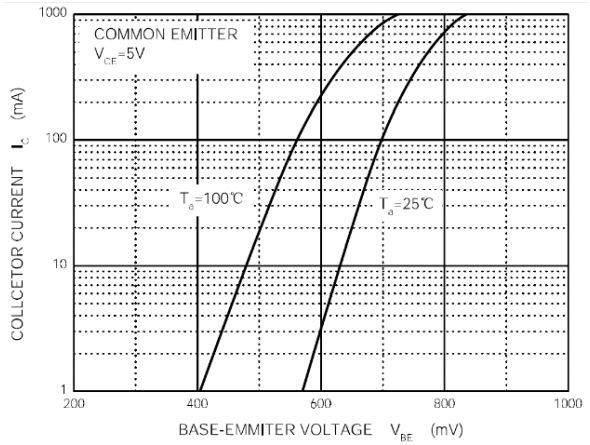


Fig 6. Capacitance vs. Reverse Voltage

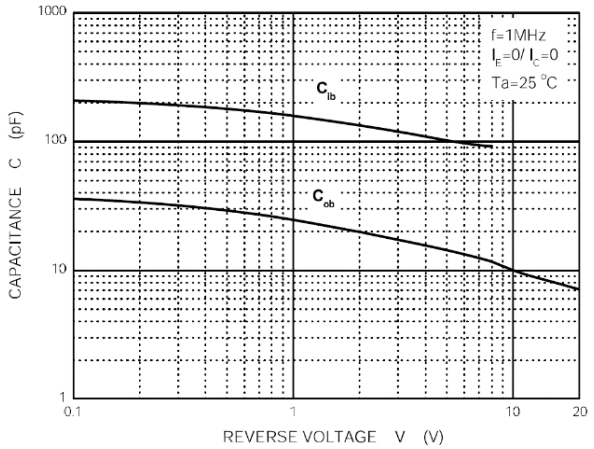


Fig 7. Gain Bandwidth Product vs. Collector Current

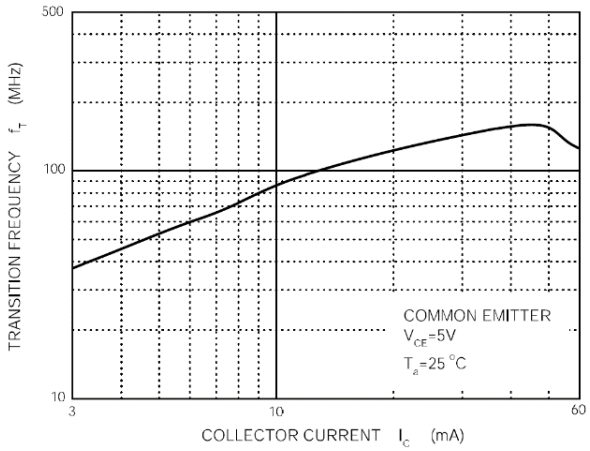
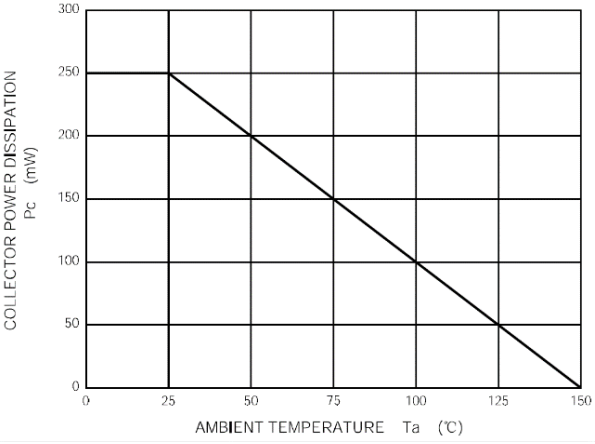
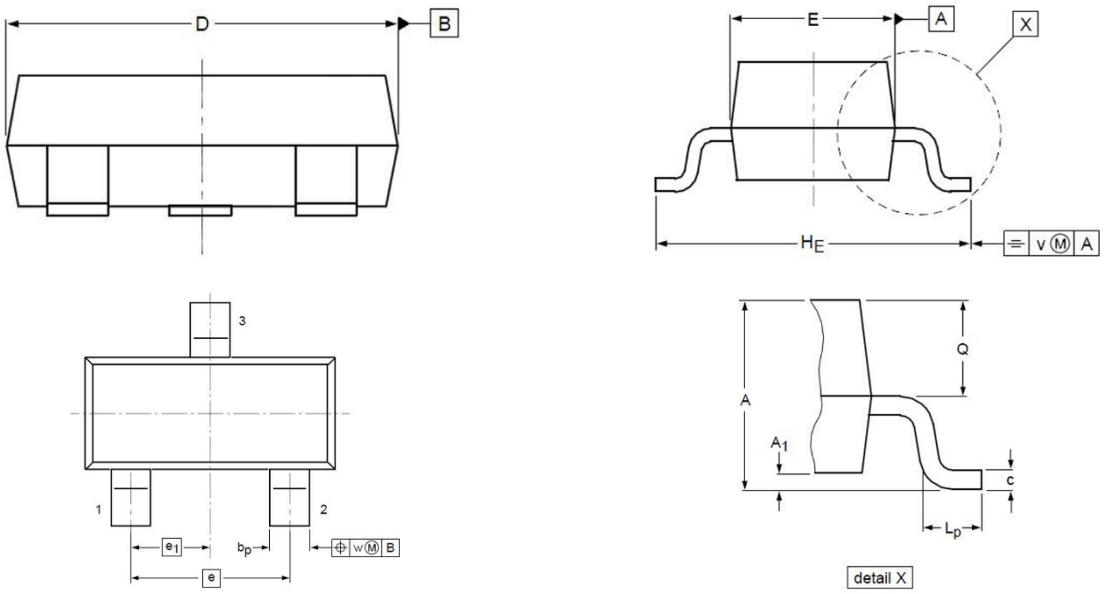


Fig 8. Collector Power Dissipation vs. Ambient Temperature



PACKAGE INFORMATION

Dimension in SOT-23 Package



Symbol	Millimeters (mm)	
	Min.	Max.
A	0.900	1.150
A1	0.010	0.100
b_p	0.300	0.500
c	0.800	0.150
D	2.800	3.000
E	1.200	1.400
e	1.900 TYP.	
e1	0.950 TYP.	
H_E	2.250	2.550
L_P	0.300	0.500
Q	0.450	0.550
v	0.200 TYP.	
w	0.100 TYP.	

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