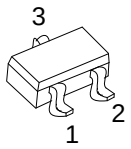
MMBT9015

PNP SILICON TRANSISTOR

PRE-AMPLIFIER, LOW LEVEL & LOW NOISE



SOT-23
(JEDEC TO-236)

■ FEATURES

*High total power dissipation. (450mW)
*Excellent h_{FE} linearity.
*Complementary to UTC MMBT9014

■ ORDERING INFORMATION

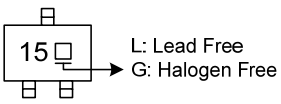
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MMBT9015L-x-AE3-R	MMBT9015G-x-AE3-R	SOT-23	B	E	C	Tape Reel

Note: Pin Assignment: B: Base E: Emitter C: Collector

MMBT9015G-x-AE3-R

(1)Packing Type	(1) R: Tape Reel
(2)Package Type	(2) AE3: SOT-23
(3)Rank	(3) x: refer to Classification of h_{FE1}
(4)Green Package	(4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Emitter Voltage	V_{CEO}	-45	V
Collector-Base Voltage	V_{CBO}	-50	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA
Collector dissipation	P_C	225	mW
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Voltage	V_{CEO}	I_C=-100μA, I_E=0	-50			V
Collector-Base Voltage	V_{CBO}	I_C=-1mA, I_B=0	-45			V
Emitter Base Voltage	V_{EBO}	I_E=-100μA, I_C=0	-5			V
Collector cutoff current	I_{CBO}	V_{CB}=-50V, I_E=0			-50	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-5V, I_C=0			-100	nA
DC Current Gain	h_{FE}	V_{CE}=-5V,Ic=-1mA	60	200	600	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-100mA, I_B=-5mA		-0.2	-0.7	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-100mA, I_B=-5mA		-0.82	-1.0	V
Base-emitter on voltage	$V_{BE(ON)}$	V_{CE}=-5V, I_C=-2mA	-0.6	-0.65	-0.75	V
Current-Gain-Bandwidth Product	f_T	V_{CE}=-5V, I_C=-10mA	100	190		MHz
Output Capacitance	C_{OB}	V_{CB}=-10V, I_E=0, f=1MHz		4.5	7.0	pF
Noise Figure	NF	V_{CE}=-5V,I_C=-0.2mA,f=1KHz,R_S=-1KΩ		0.7	10	dB

■ CLASSIFICATION OF h_{FE}

RANK	A	B	C
RANGE	60-150	100-300	200-600