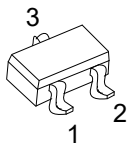
MMBT1015B

Preliminary | ***PNP SILICON TRANSISTOR***

LOW FREQUENCY PNP AMPLIFIER TRANSISTOR



SOT-23
(JEDEC TO-236)

■ FEATURES

* Collector-Emitter Voltage: BV_{CEO}= -50V
* Collector current up to 150mA
* High h_{FE} linearity
* Complement to MMBT1815

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MMBT1015BL-x-AE3-R	MMBT1015BG-x-AE3-R	SOT-23	B	E	C	Tape Reel

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

MMBT1015BG-x-AE3-R
(1)Packing Type
(2)Package Type
(3)Rank
(4)Green Package

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

■ MARKING

PACKAGE	MARKING		
	Y	GR	BL
SOT-23	B4Y□ L: Lead Free G: Halogen Free	B4G□ L: Lead Free G: Halogen Free	B4B□ L: Lead Free G: Halogen Free

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Dissipation	P_C	250	mW
Collector Current	I_C	-150	mA
Base Current	I_B	-50	mA
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-Base Breakdown Voltage	BV_{CBO}	I_C = -100μA, I_E = 0	-50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = -10mA, I_B = 0	-50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E = -10μA, I_C = 0	-5			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C = -100mA, I_B = -10mA			-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C = -100mA, I_B = -10mA			-1.1	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -50V, I_E = 0			-100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB} = -5V, I_C = 0			-100	nA
DC Current Gain	h_{FE1}	V_{CE} = -6V, I_C = -2mA	120		700	
	h_{FE2}	V_{CE} = -6V, I_C = -150mA	25			
Transition Frequency	f_T	V_{CE} = -10V, I_C = -1mA	80			MHz

■ CLASSIFICATION OF h_{FE1}

RANK	Y	GR	BL
RANGE	120-240	200-400	350-700