



MMBT1015B

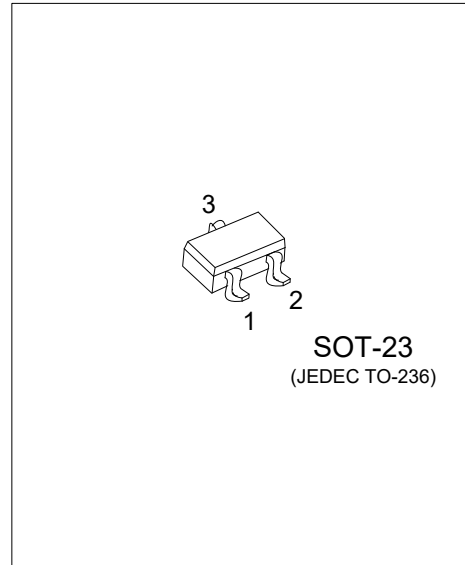
Preliminary

PNP SILICON TRANSISTOR

**LOW FREQUENCY PNP
AMPLIFIER TRANSISTOR**

■ **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

<p>MMBT1015BG-x-AE3-R</p>	<p>(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</p>
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■ **MARKING**

PACKAGE	MARKING		
	Y	GR	BL
SOT-23			

■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CB0}	-50	V
Collector-Emitter Voltage	V_{CE0}	-50	V
Emitter-Base Voltage	V_{EB0}	-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	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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 ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = -100\mu\text{A}$, $I_E = 0$	-50			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = -10\text{mA}$, $I_B = 0$	-50			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = -10\mu\text{A}$, $I_C = 0$	-5			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$			-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$			-1.1	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50\text{V}$, $I_E = 0$			-100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-100	nA
DC Current Gain	h_{FE1}	$V_{CE} = -6\text{V}$, $I_C = -2\text{mA}$	120		700	
	h_{FE2}	$V_{CE} = -6\text{V}$, $I_C = -150\text{mA}$	25			
Transition Frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -1\text{mA}$	80			MHZ

■ CLASSIFICATION OF h_{FE1}

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

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