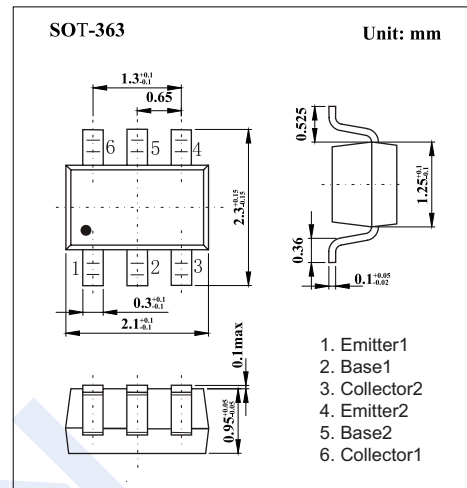
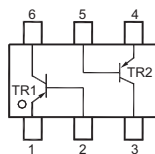


PNP Transistor

MMBT5401DW (KMBT5401DW)

■ Features

- Silicon epitaxial planar transistor
- For high voltage amplifier applications

■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-160	V
Collector - Emitter Voltage	V_{CE0}	-150	
Emitter - Base Voltage	V_{EB0}	-5	
Collector Current	I_C	-600	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to +150	

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -100\ \mu\text{A}, I_E = 0$	-160			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -1.0\ \text{mA}, I_B = 0$	-150			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -10\ \mu\text{A}, I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -120\text{V}, I_E = 0$			-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3\text{V}, I_C = 0$			-50	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\ \text{mA}, I_B = -1\ \text{mA}$			-0.2	V
		$I_C = -50\ \text{mA}, I_B = -5\ \text{mA}$			-0.5	
Base - emitter voltage	$V_{BE(sat)}$	$I_C = -10\ \text{mA}, I_B = -1\ \text{mA}$			-1	
		$I_C = -50\ \text{mA}, I_B = -5\ \text{mA}$			-1	
DC current gain	h_{FE}	$I_C = -1\ \text{mA}, V_{CE} = -5\ \text{V}$	50			
		$I_C = -10\ \text{mA}, V_{CE} = -5\ \text{V}$	60		240	
		$I_C = -50\ \text{mA}, V_{CE} = -5\ \text{V}$	50			
Transition frequency	f_T	$I_C = -10\ \text{mA}, V_{CE} = -10\ \text{V}, f = 100\ \text{MHz}$	100		300	MHz
Output Capacitance	C_{obo}	$V_{CB} = -10\ \text{V}, f = 1\ \text{MHz}$			6	pF

PNP Transistor

MMBT5401DW (KMBT5401DW)

■ Typical Characteristics

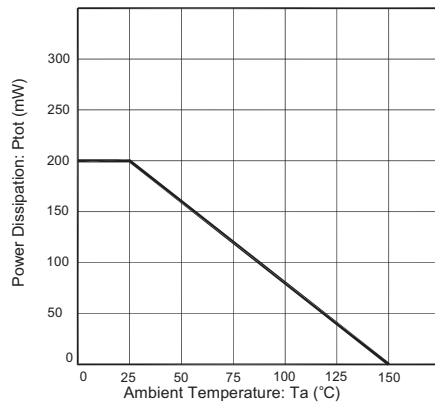


Fig. 1 Max Power Dissipation vs Ambient Temperature

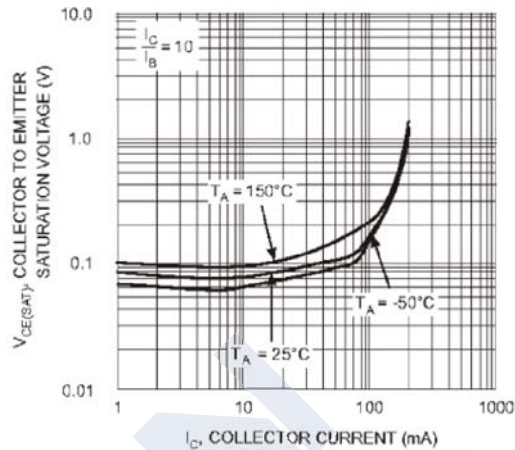


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

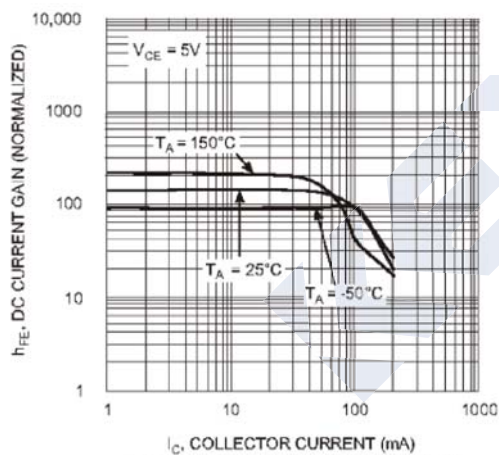


Fig. 3, DC Current Gain vs. Collector Current

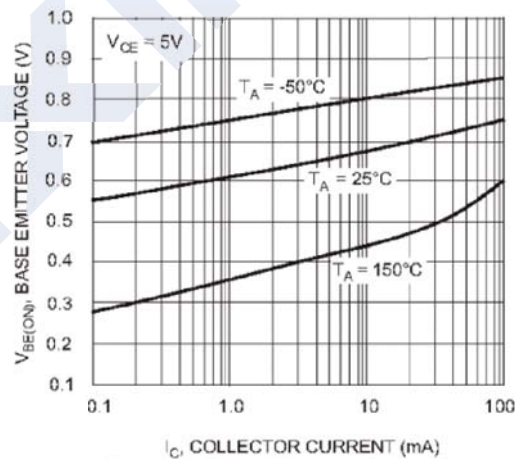


Fig. 4, Base Emitter Voltage vs. Collector Current

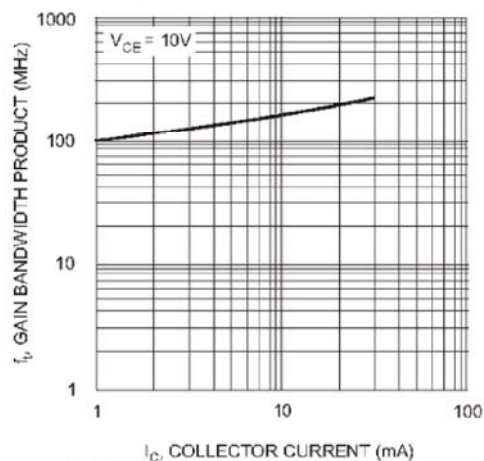


Fig. 5, Gain Bandwidth Product vs Collector Current