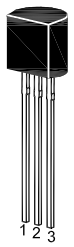
MPSA63 / 64

PNP Silicon Epitaxial Planar Darlington Transistor



1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

Application

• For high gain amplification

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	30	V
Collector Emitter Voltage	$-V_{CES}$	30	V
Emitter Base Voltage	$-V_{EBO}$	10	V
Collector Current	$-I_C$	500	mA
Total Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	200	℃/W

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Characteristics at T_a = 25℃

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	MPSA63	h_{FE}	5000	-	-
	MPSA64	h_{FE}	10000	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 100 mA	MPSA63	h_{FE}	10000	-	-
	MPSA64	h_{FE}	20000	-	-
Collector Base Cutoff Current at $-V_{CB}$ = 30 V		$-I_{CBO}$	-	100	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 10 V		$-I_{EBO}$	-	100	nA
Collector Base Breakdown Voltage at $-I_C$ = 100 µA		$-V_{(BR)CBO}$	30	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 100 µA		$-V_{(BR)CES}$	30	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 100 µA		$-V_{(BR)EBO}$	10	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 100 µA		$-V_{CE(sat)}$	-	1.5	V
Base Emitter On Voltage at $-V_{CE}$ = 5 V, $-I_C$ = 100 mA		$V_{BE(on)}$	-	2	V
Transition Frequency at $-V_{CE}$ = 5 V, I_E = 10 mA		f_T	125	-	MHz

Dated: 15/07/2022 Rev: 02

Electrical Characteristics Curves

Fig. 1 DC Current Gain vs. Collector Current

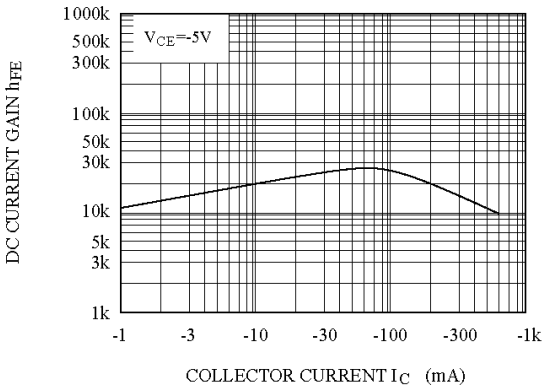


Fig. 2 F_T vs. Collector Current

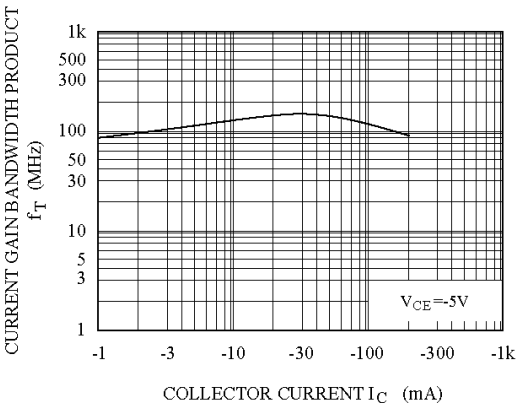


Fig. 3 V_{BESAT} .V_{CESAT} vs. Collector Current

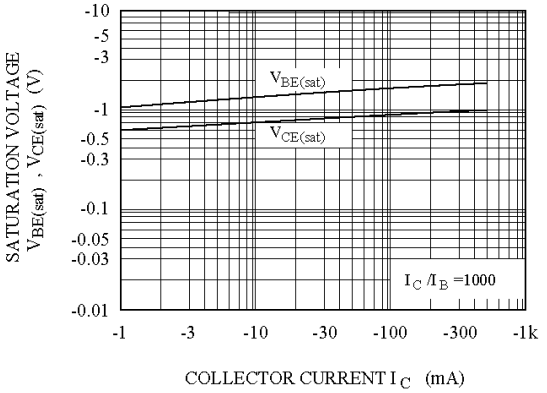
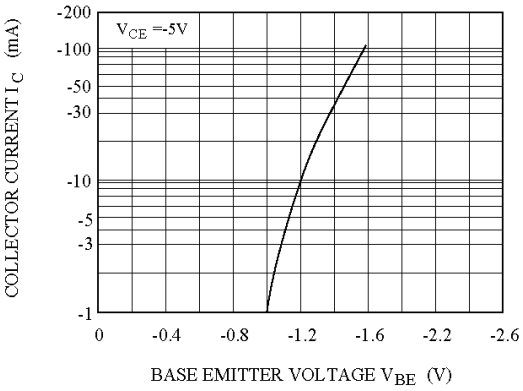
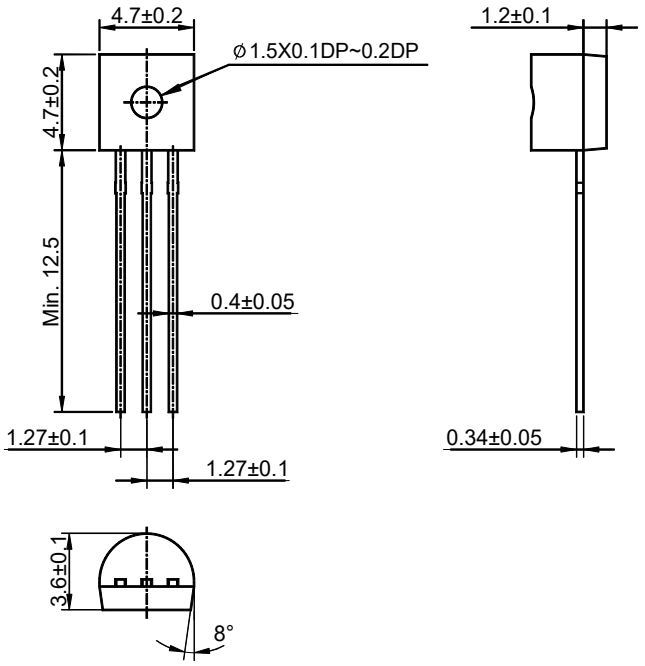


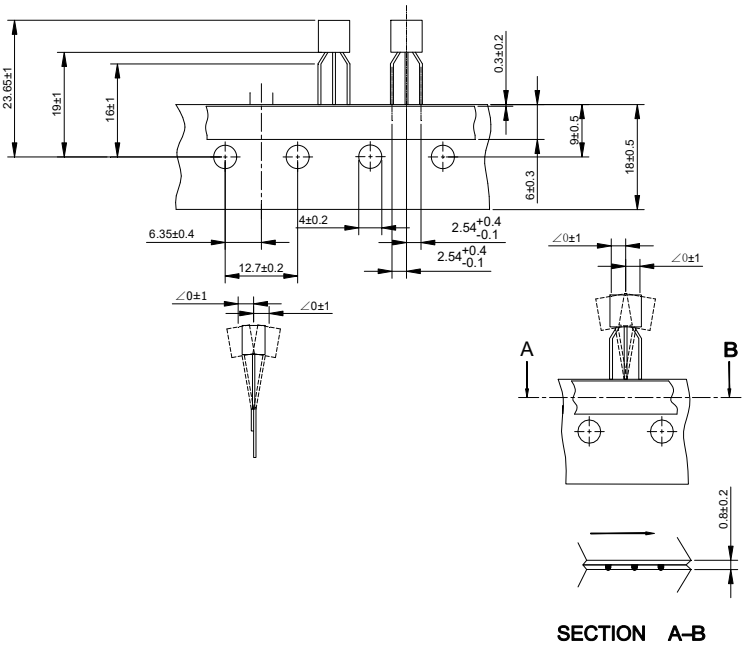
Fig. 4 V_{BEON} vs. Collector Current



TO-92 Package Outline (Dimensions in millimeters)



TO-92 Ammo-Pack Outline (Dimensions in millimeters)



Packing information

Package	Bulk Packing			Ammo-Packing	
	Per Bag Qty	Per Box Qty	Per Carton Qty	Per Box Qty	Per Carton Qty
TO-92	1,000	5,000	50,000	4,000	20,000

Dated: 15/07/2022 Rev: 02