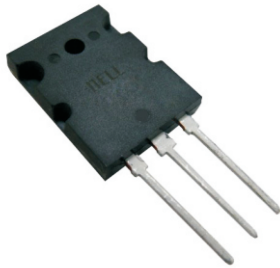


Silicon PNP triple diffusion planar transistor

-15A/-230V/150W

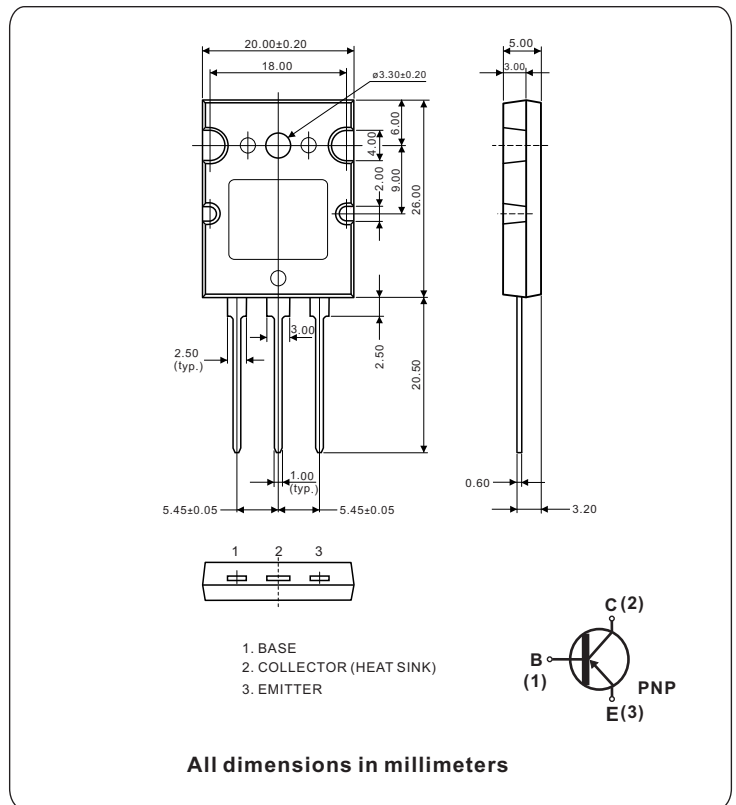

TO-3PL

FEATURES

- High-speed switching
- High collector-emitter voltage: $V_{CE0} = -230V(\text{min})$
- Complementary to TTC5200
- TO-3PL package which can be installed to the heat sink with one screw

APPLICATIONS

- Power amplifier
- Recommended for 100W high-fidelity audio frequency amplifier output stage



ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)			
SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector to base voltage	-230	V
V_{CEO}	Collector to emitter voltage	-230	
V_{EBO}	Emitter to base voltage	-5	
I_C	Collector current	-15	A
I_{CP}	Peak collector current, $t_p \leq 5\text{ms}$	-30	
I_B	Base current	-1.5	
P_C	Collector power dissipation	$T_C = 25^\circ\text{C}$ 150	W
T_j	Junction temperature	150	$^\circ\text{C}$
T_{stg}	Storage temperature	-55 to 150	

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)						
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
I_{CBO}	Collector cutoff current	$V_{CBO} = -230\text{V}, I_E = 0$			-5.0	μA
I_{EBO}	Emitter cutoff current	$V_{EBO} = -5\text{V}, I_C = 0$			-5.0	
$V_{(BR)CEO}$	Collector to emitter breakdown voltage	$I_{CEO} = -50\text{mA}, I_B = 0$	-230			V
V_{CBO}	Collector to base voltage	$I_{CBO} = -50\text{mA}$	-230			
V_{EBO}	Emitter to base voltage	$I_{EBO} = -0.1\text{mA}$	-5			
h_{FE}	Forward current transfer ratio (DC current gain)	$V_{CE} = -5\text{V}, I_C = -1\text{A}$	80		160	
		$V_{CE} = -5\text{V}, I_C = -7\text{A}$	35			
$V_{CE(sat)}$	Collector to emitter voltage	$I_C = -8\text{A}, I_B = -0.8\text{V}$			-3.0	V
V_{BE}	Base to emitter voltage	$I_C = -7\text{A}, V_{CE} = -5\text{V}$			-1.5	
f_T	Transition frequency	$V_{CE} = -5\text{V}, I_C = -1\text{A}$		30		MHz
C_{ob}	Collector output capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		240		pF

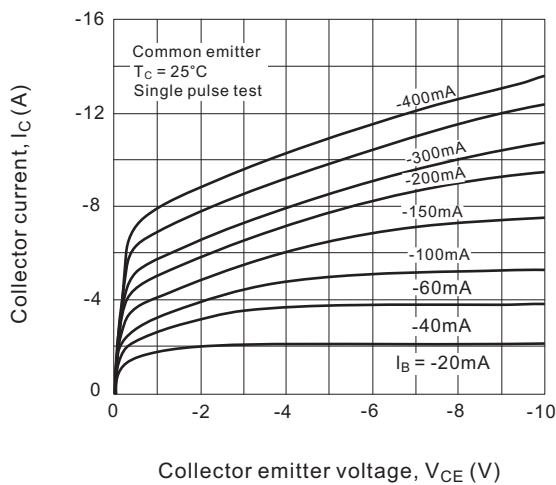
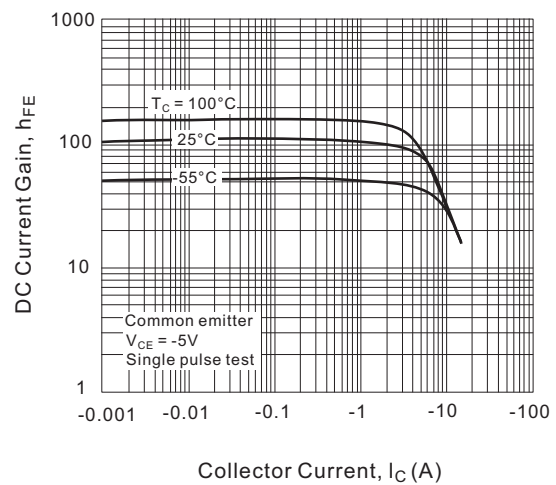
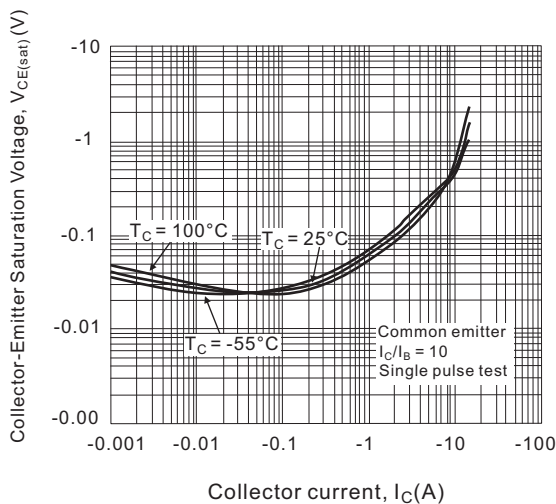
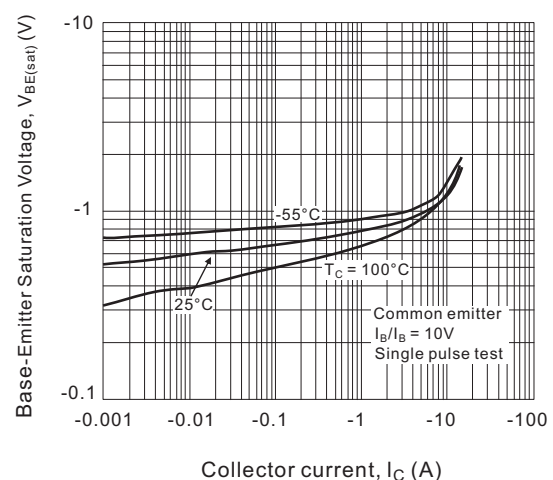
Fig.1 I_C - V_{CE} Characteristics

Fig.2 h_{FE} - I_C Characteristics

Fig.3 $V_{CE(sat)}$ - I_C Temperature Characteristics

Fig.4 $V_{BE(sat)}$ - I_C Temperature Characteristics


Fig.5 $I_C - V_{BE}$ Temperature Characteristics

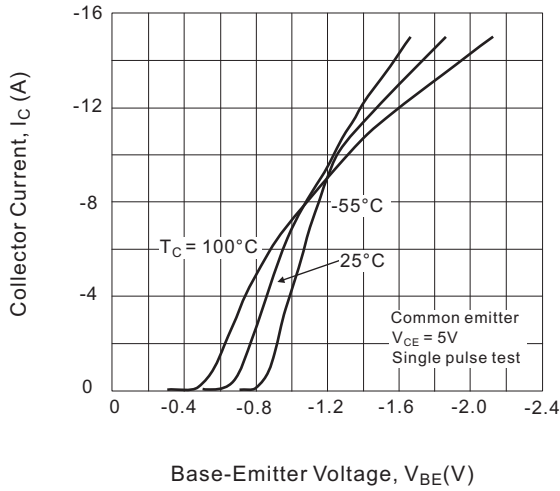


Fig.6 $P_C - T_a$ Derating

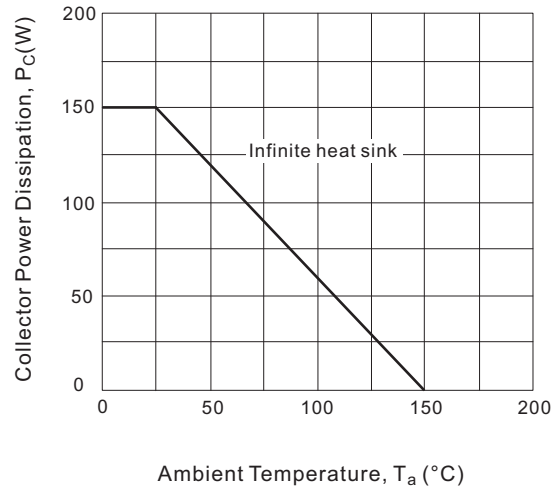


Fig.7 Transient thermal resistance

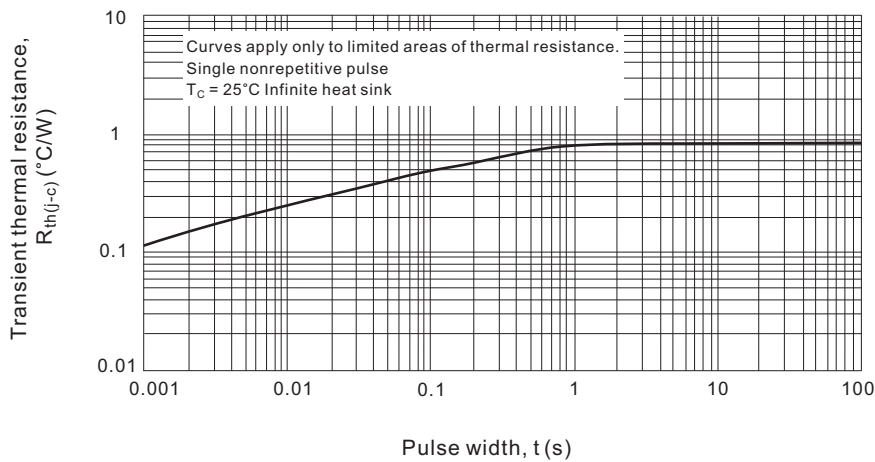


Fig.8 Safe Operating Area (SOA)

