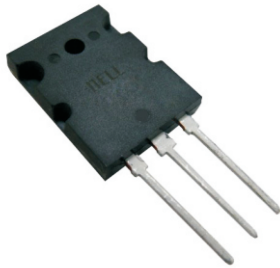


## Silicon PNP triple diffusion planar transistor

### -15A/-230V/150W

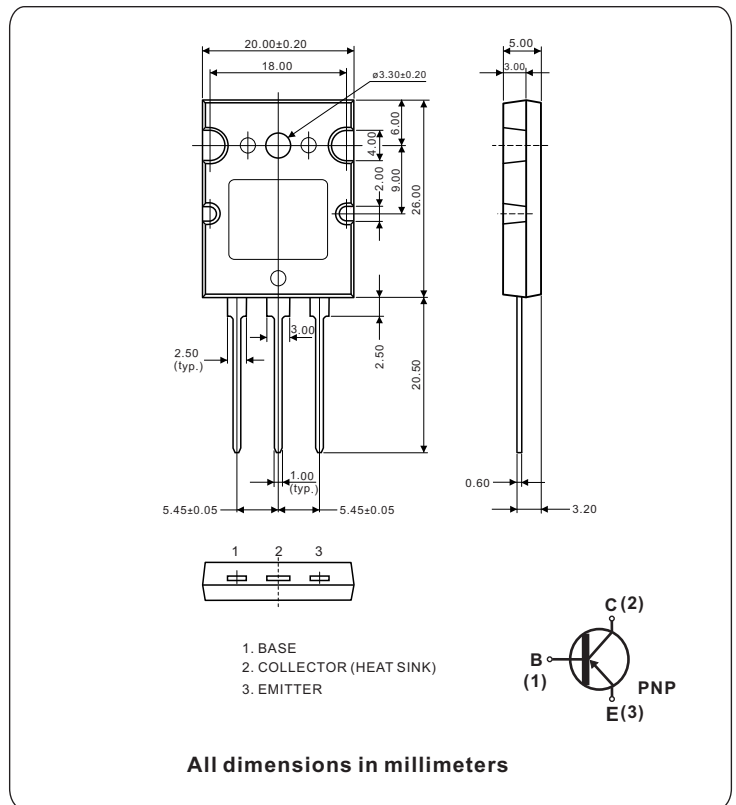

**TO-3PL**

#### 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

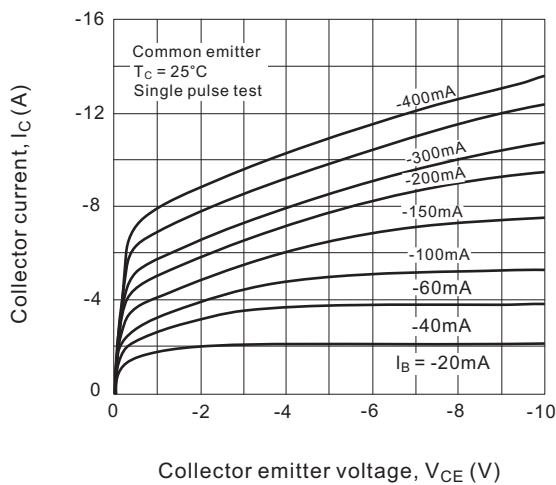
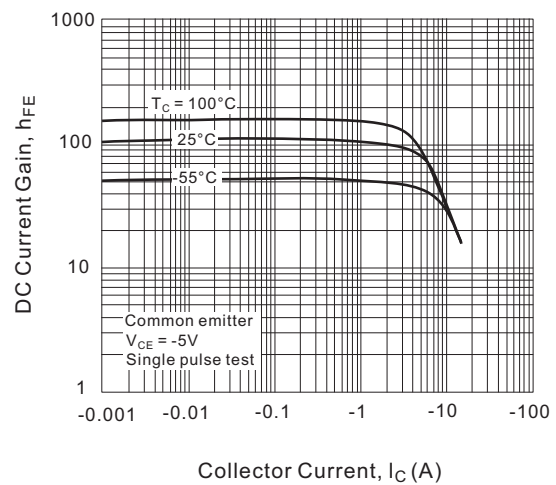
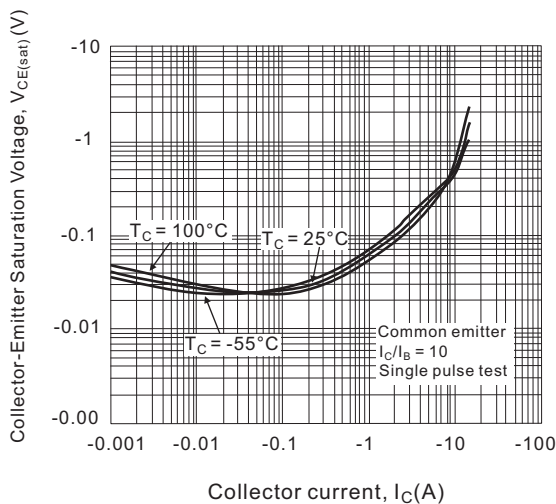
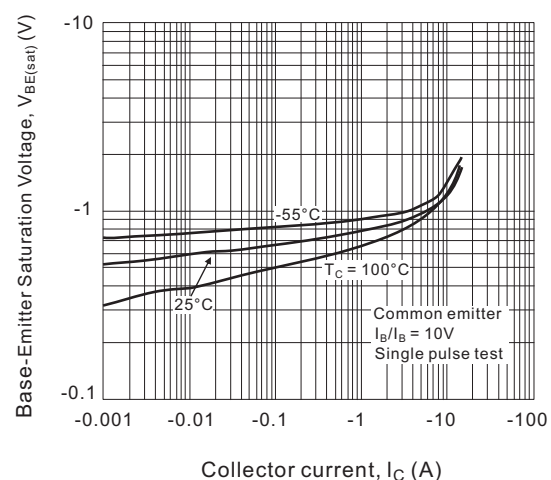
#### APPLICATIONS

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

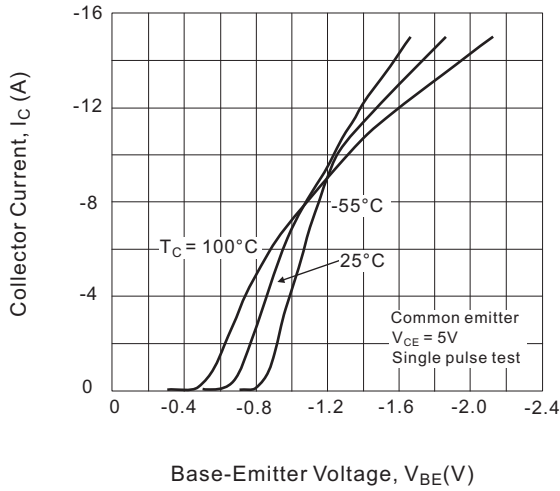


ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )			
SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector to base voltage	-230	V
$V_{CEO}$	Collector to emitter voltage	-230	
$V_{EBO}$	Emitter to base voltage	-5	
$I_C$	Collector current	-15	A
$I_{CP}$	Peak collector current, $t_p \leq 5\text{ms}$	-30	
$I_B$	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	

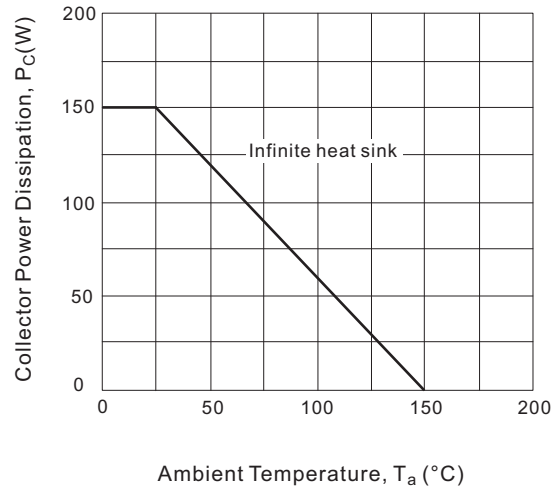
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )						
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$I_{CBO}$	Collector cutoff current	$V_{CBO} = -230\text{V}, I_E = 0$			-5.0	$\mu\text{A}$
$I_{EBO}$	Emitter cutoff current	$V_{EBO} = -5\text{V}, I_C = 0$			-5.0	
$V_{(BR)CEO}$	Collector to emitter 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**


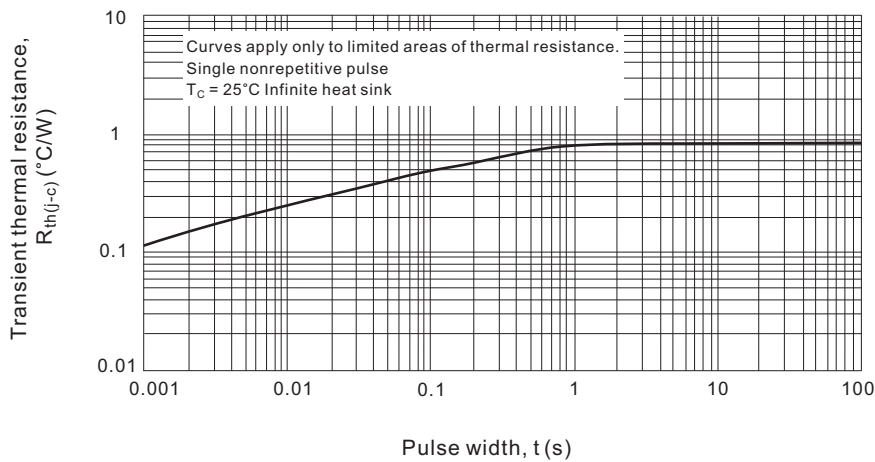
**Fig.5  $I_C - V_{BE}$  Temperature Characteristics**



**Fig.6  $P_C - T_a$  Derating**



**Fig.7 Transient thermal resistance**



**Fig.8 Safe Operating Area (SOA)**

