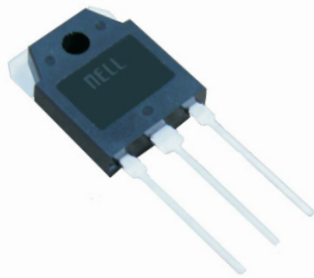


Silicon PNP Epitaxial Planar Transistor (Complement to type 2SC3519B) -15A/-160V,-180V/130W



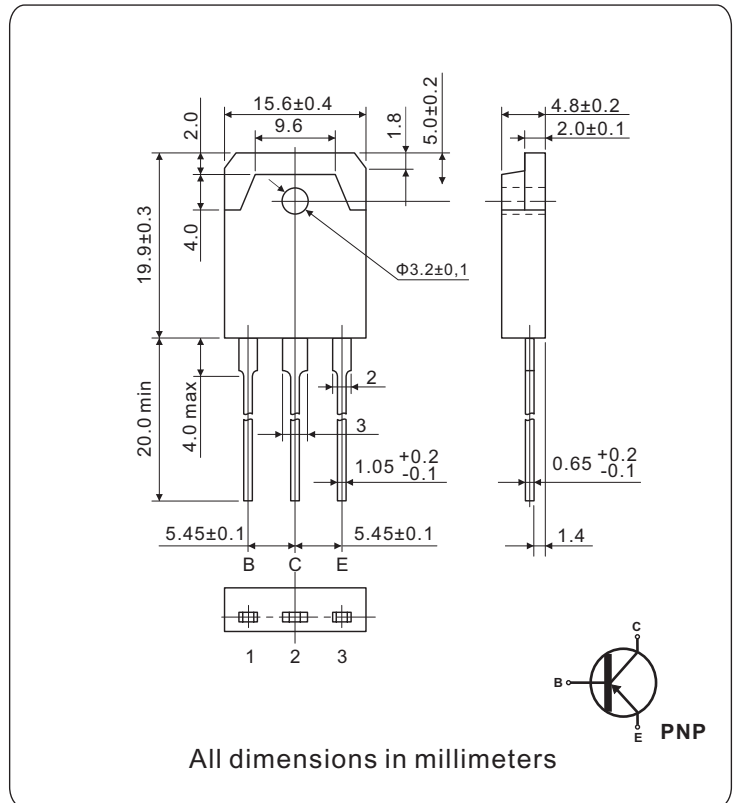
TO-3P(B)

FEATURES

- Recommend for 105W high Fidelity audio frequency amplifier output stage
- Complement to type 2SC3519B & 2SC3519B-A

APPLICATIONS

- Audio and general purpose



ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE		UNIT
		2SA1386B	2SA1386B-A	
V_{CBO}	Collector to base voltage	-160	-180	V
V_{CEO}	Collector to emitter voltage	-160	-180	
V_{EBO}	Emitter to base voltage	-5		
$I_{CP} (I_{CM})$	Peak collector current	-30		A
I_C	Collector current	-15		
I_B	Base current	-4		
P_C	Collector power dissipation	$T_C = 25^\circ\text{C}$ 130		W
	Derate above 25°C	1.04		W/ $^\circ\text{C}$
T_j	Junction temperature	150		$^\circ\text{C}$
T_{stg}	Storage temperature	-55 to 150		

THERMAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th(j-a)}$	Maximum thermal resistance, junction to ambient	1.65	$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS (T _a = 25°C)						
SYMBOL	PARAMETER	CONDITIONS	min	typ	max	UNIT
V _{(BR)CEO}	Collector to emitter breakdown voltage	I _C = -25mA, I _B = 0	2SC3519B 2SC3519B-A	-160 -180		V
I _{CBO}	Collector cutoff current	V _{CB} = -160V, I _E = 0	2SC3519B		-100	μA
		V _{CB} = -180V, I _E = 0	2SC3519B-A		-100	
I _{EBO}	Emitter cutoff current	V _{EB} = -5V, I _C = 0			-100	
h _{FE}	Forward current transfer ratio	V _{CE} = -4V, I _C = -5A		50		
V _{CE(sat)}	Collector to emitter saturation voltage	I _C = -5A, I _B = -0.5A			-2.0	V
f _T	Transition frequency (Current gain - Bandwidth product)	V _{CE} = -12V, I _C = -2A		40		MHz
t _{on}	Turn-on time	I _C = -10A, I _{B1} = -1.0A, I _{B2} = 1.0A		0.30		μs
t _{stg}	Storage time	V _{CC} = -40V, R _L = 4Ω, V _{BB1} = -10V, V _{BB2} = 5V		0.70		
t _f	Fall time			0.20		
C _{OB}	Output capacitance	V _{CB} = -10V, I _E = 0, f _{test} = 1MHz		500		pF

Fig.1 I_C-V_{CE} Characteristics (Typical)

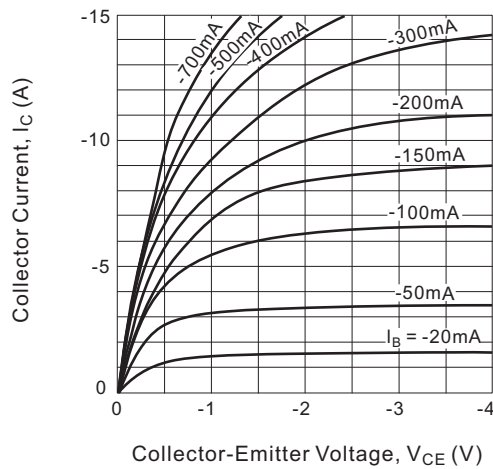


Fig.2 V_{CE(sat)} - I_B Characteristics (Typical)

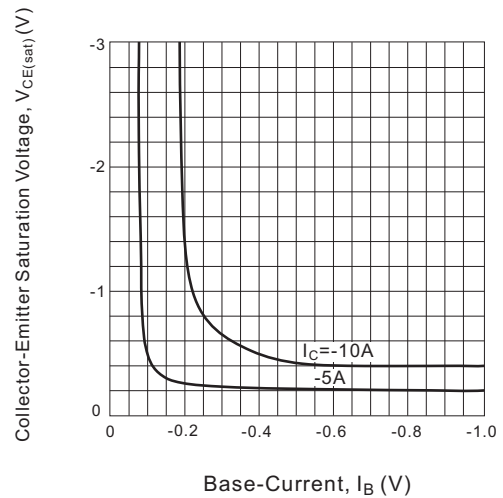


Fig.3 I_C-V_{BE} Temperature Characteristics (Typical)

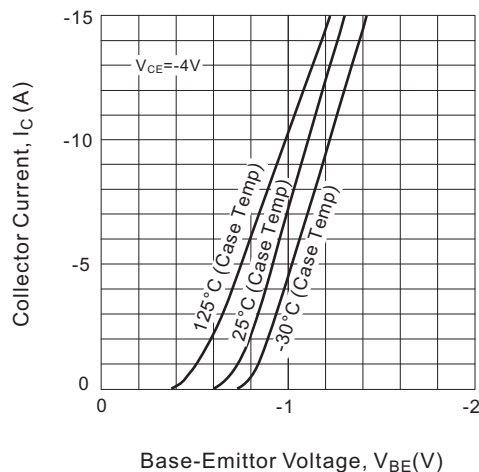


Fig.4 h_{FE}-I_C Characteristics (Typical)

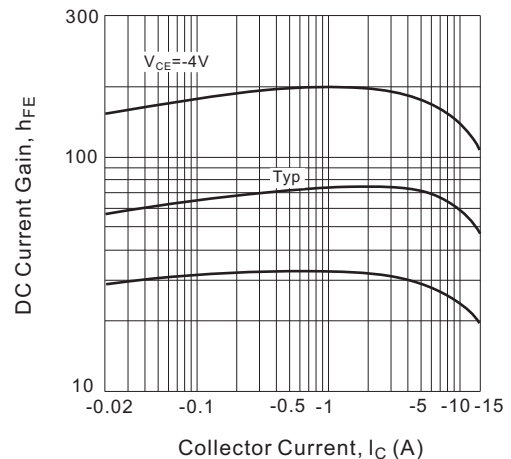


Fig.5 h_{FE} - I_C Temperature Characteristics (Typical)

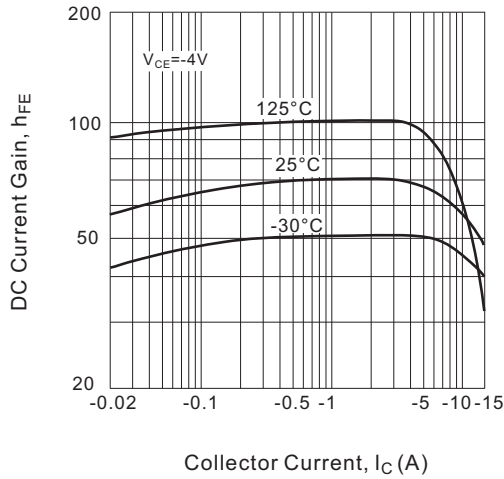


Fig.6 $R_{th(j-a)}$ - t Characteristics

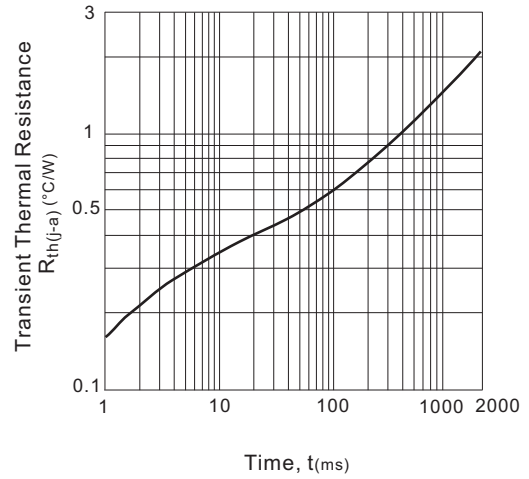


Fig.7 f_T - I_E Characteristics (Typical)

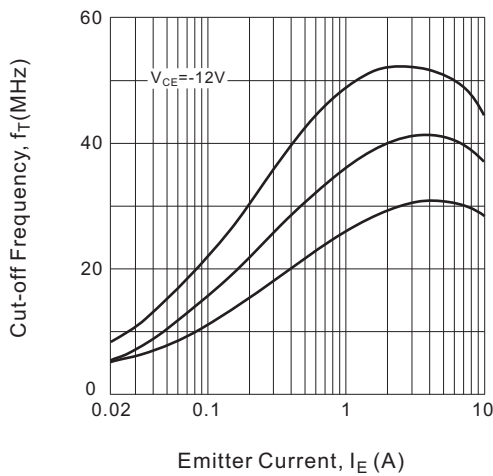


Fig.8 Safe Operating Area (Single Pulse)

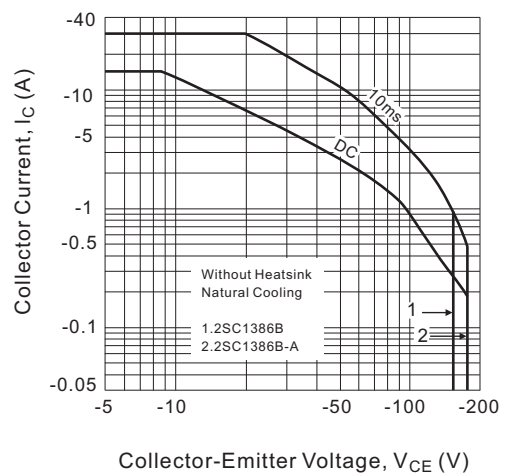


Fig.9 P_C - T_a Derating

