

# 2SC4787

## Silicon NPN epitaxial planer type

For intermediate frequency amplification

### Features

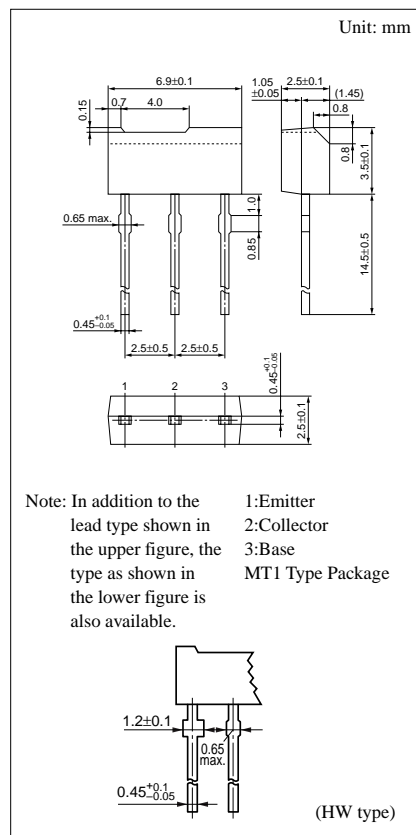
- High transition frequency  $f_T$ .
- Satisfactory linearity of forward current transfer ratio  $h_{FE}$ .
- Allowing supply with the radial taping.

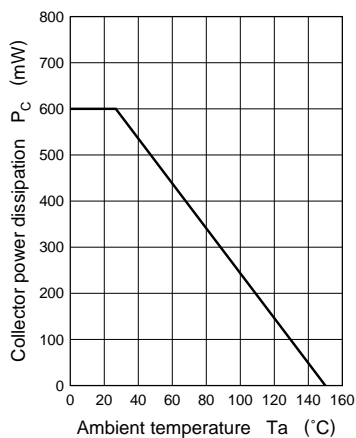
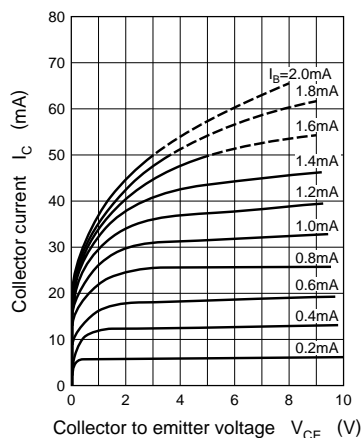
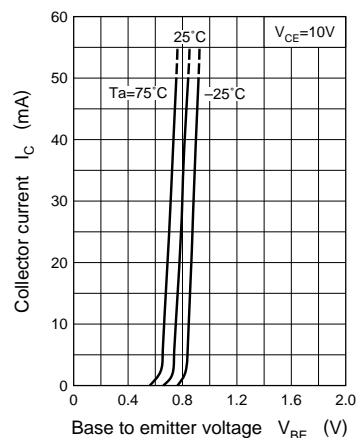
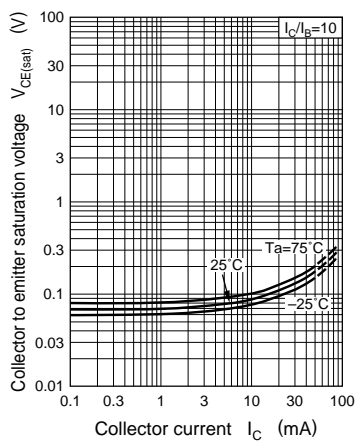
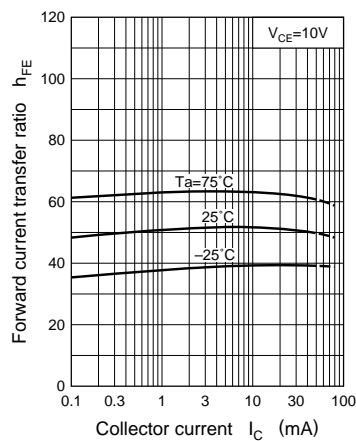
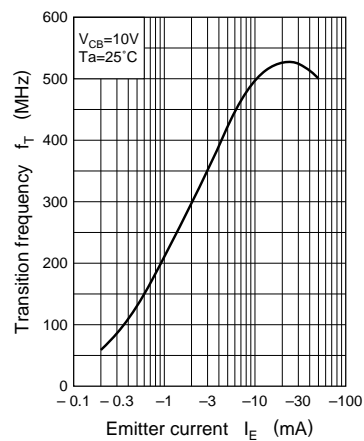
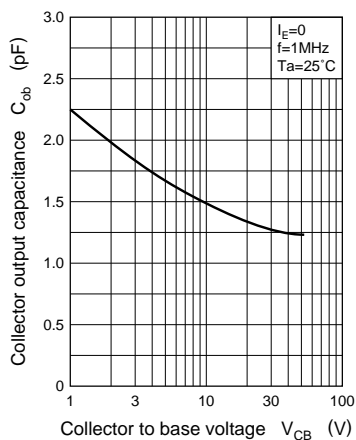
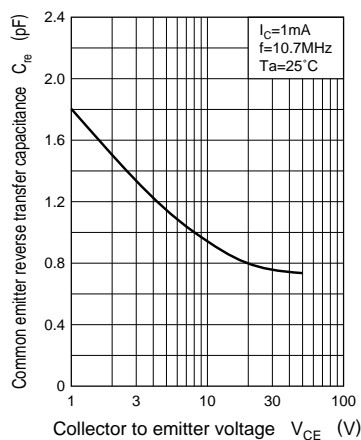
### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	45	V
Collector to emitter voltage	$V_{CEO}$	35	V
Emitter to base voltage	$V_{EBO}$	4	V
Collector current	$I_C$	50	mA
Collector power dissipation	$P_C$	600	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	$-55 \sim +150$	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 20\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Collector to base voltage	$V_{CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	45			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 1\text{mA}, I_B = 0$	35			V
Emitter to base voltage	$V_{EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	4			V
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	20	50	100	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20\text{mA}, I_B = 2\text{mA}$			0.5	V
Common emitter reverse transfer capacitance	$C_{re}$	$V_{CB} = 10\text{V}, I_E = -1\text{mA}, f = 10.7\text{MHz}$			1.5	pF
Power gain	PG	$V_{CB} = 10\text{V}, I_E = -10\text{mA}, f = 58\text{MHz}$	18			dB
Transition frequency	$f_T$	$V_{CB} = 10\text{V}, I_E = -10\text{mA}, f = 100\text{MHz}$	300	500		MHz



$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$  $C_{re} - V_{CE}$  $PG - I_E$ 