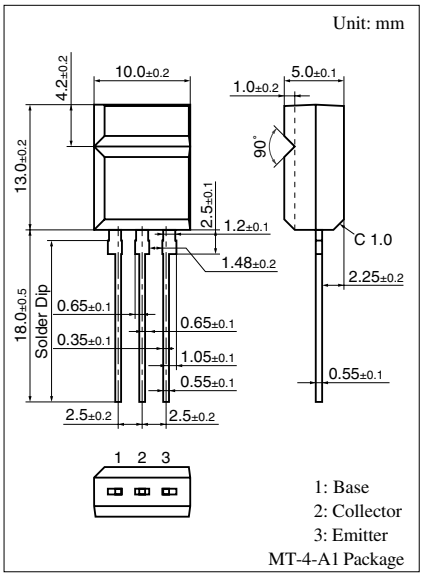
2SD2530

Silicon NPN triple diffusion planar type Darlington

For power amplification



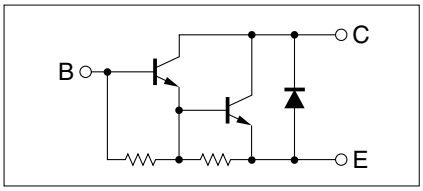
■ Features

- High forward current transfer ratio h_{FE}
- Allowing supply with the radial taping
- Low collector to emitter saturation voltage $V_{CE(sat)}$: < 2.5 V

■ Absolute Maximum Ratings $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Collector to base voltage		V_{CBO}	100	V
Collector to emitter voltage		V_{CEO}	100	V
Emitter to base voltage		V_{EBO}	5	V
Peak collector current		I_{CP}	10	A
Collector current		I_C	5	A
Collector power dissipation	$T_C = 25°C$	P_C	15	W
	$T_a = 25°C$		2	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

Internal Connection



■ Electrical Characteristics $T_C = 25°C \pm 2°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 100 V, I_E = 0			100	µA
	I_{CEO}	V_{CE} = 80 V, I_B = 0			100	µA
Emitter cutoff current	I_{EBO}	V_{EB} = 5 V, I_C = 0			5	mA
Collector to emitter voltage	V_{CEO}	I_C = 10 mA, I_B = 0	100			V
Forward current transfer ratio	h_{FE1}	V_{CE} = 4 V, I_C = 2 A	2 000		15 000	
	h_{FE2}	V_{CE} = 4 V, I_C = 4 A	500			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 2 A, I_B = 2 mA			1.5	V
		I_C = 4 A, I_B = 16 mA			2.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 4 A, I_B = 16 mA			2.5	V
Transition frequency	f_T	V_{CE} = 10 V, I_C = 0.5 A, f = 1 MHz		20		MHz
Turn-on time	t_{on}	I_C = 4 A, I_{B1} = 16 mA, I_{B2} = −16 mA,		0.27		µs
Storage time	t_{stg}	V_{CC} = 50 V		2.9		µs
Fall time	t_f			1.0		µs

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