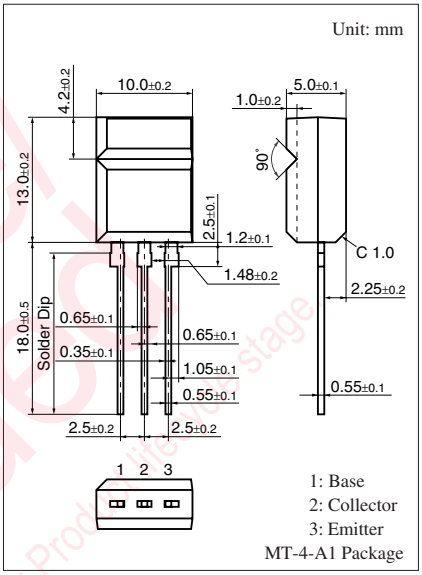
2SD2137A

Silicon NPN triple diffusion planar type

For power amplification

Complementary to 2SB1417A



■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity.
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Collector-base voltage (Emitter open)		V_{CBO}	80	V
Collector-emitter voltage (Base open)		V_{CEO}	80	V
Emitter-base voltage (Collector open)		V_{EBO}	6	V
Collector current		I_C	3	A
Peak collector current		I_{CP}	5	A
Collector power dissipation		P_C	15	W
	$T_a = 25°C$		2.0	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_C = 25°C \pm 3°C$

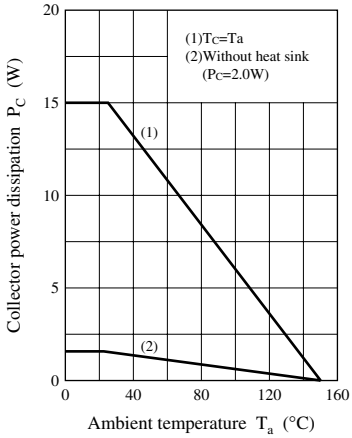
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 30 mA, I_B = 0	80			V
Base-emitter voltage	V_{BE}	V_{CE} = 4 V, I_C = 3 A			1.8	V
Collector-emitter cutoff current (E-B short)	I_{CES}	V_{CB} = 80 V, V_{BE} = 0			100	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	V_{CE} = 60 V, I_B = 0			100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	V_{EB} = 6 V, I_C = 0			100	μA
Forward current transfer ratio	h_{FE1} *	V_{CE} = 4 V, I_C = 1 A	70		320	—
	h_{FE2}	V_{CE} = 4 V, I_C = 3 A	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 3 A, I_B = 0.375 A			1.2	V
Transition frequency	f_T	V_{CE} = 5 V, I_C = 0.2 A, f = 10 MHz		30		MHz
Turn-on time	t_{on}	I_C = 1 A, I_{B1} = 0.1 A, I_{B2} = − 0.1 A		0.3		μs
Storage time	t_{stg}	V_{CC} = 50 V		2.5		μs
Fall time	t_f			0.2		μs

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

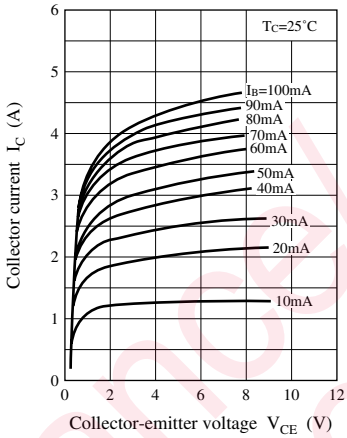
Rank	Q	P	O
h_{FE1}	70 to 150	120 to 250	160 to 320

Maintenance/Discontinued
This product includes following four Products in maintenance stage.
2SD2137A
2SD2137AG
2SD2137AH
2SD2137AS
Maintenance/Discontinued Products
Please contact us for discontinued type
http://www.semicon.panasonic.co.jp/en/
Please refer to following URL about latest information.

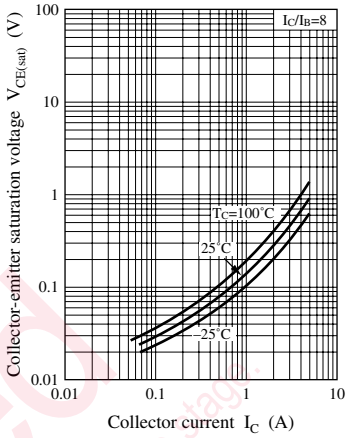
P_C — T_a



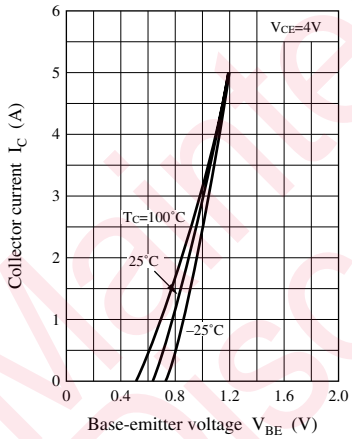
I_C — V_{CE}



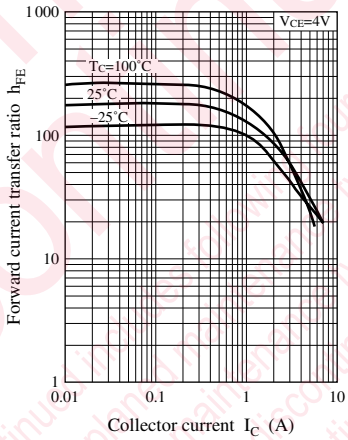
$V_{CE(sat)}$ — I_C



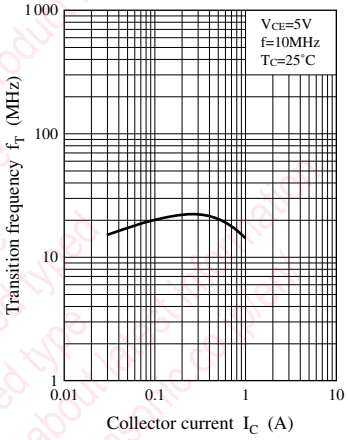
I_C — V_{BE}



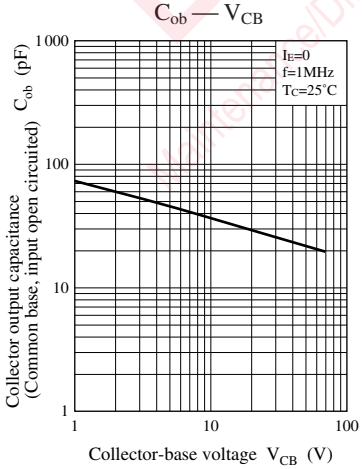
h_{FE} — I_C



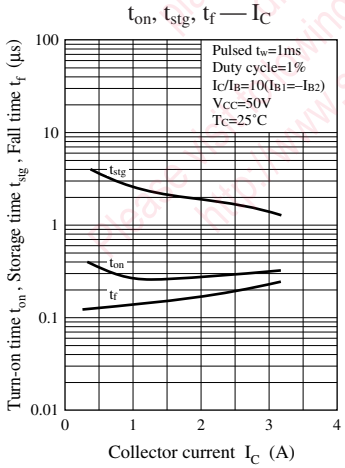
f_T — I_C



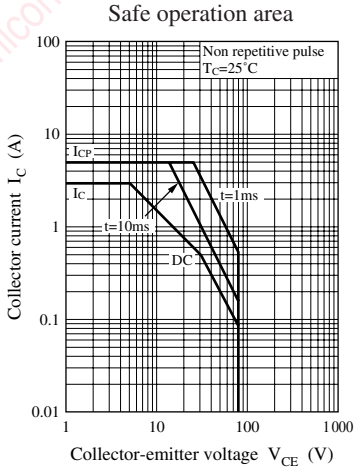
C_{ob} — V_{CB}



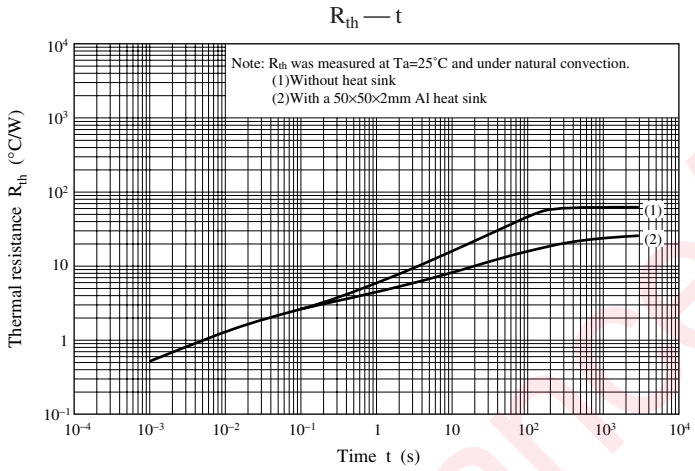
t_{on}, t_{stg}, t_f — I_C



Safe operation area



Maintenance/Discontinued
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Please note that this type is planned to be discontinued (expected to change to non-standard).
Please refer to the following URL about the discontinued types and their alternatives.
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Maintenance/ Discontinued
Maintenance/Discontinued includes following four Product lifecycle stage.
planed maintenance type
maintenance type
planed discontinued typed
discontinued type
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maintenance type
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discontinued type
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