2SD1915

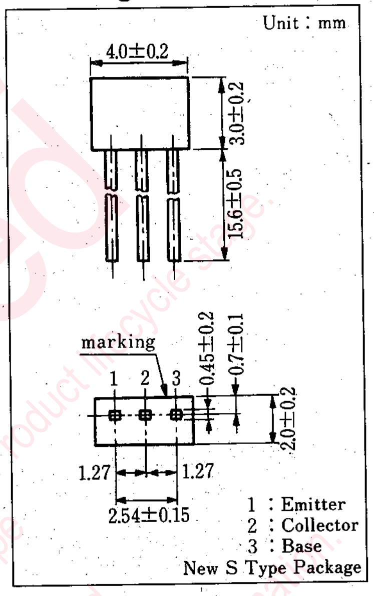
Silicon NPN Epitaxial Planar Type

For low-frequency output amplification

■ Features

- High emitter-base voltage V_{EBO}
- Large DC current gain h_{FE}
- Low ON resistance R_{on}
- Automatic insertion by radial taping possible

■ Package Dimensions



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	25	V
Peak Collector Current	I_{CP}	500	mA
Collector Current	I_C	300	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	−55～+150	℃

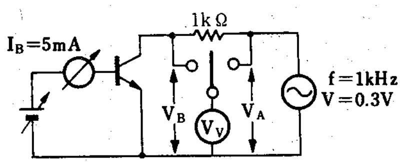
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector-Emitter Voltage	V_{CEO}	I_C= 1 mA, I_B= 0	20			V
Collector Cutoff Current	I_{CBO}	V_{CB}=50V, I_E= 0			0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=25V, I_C= 0			0.1	μA
DC Current Gain	h_{FE} *1	V_{CE}= 2 V, I_C= 4 mA	500		2500	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=30mA, I_B= 3 mA			0.1	V
Base-Emitter Voltage	V_{BE}	V_{CE}= 2 V, I_C= 4 mA		0.6		V
Transition Frequency	f_T	V_{CB}= 6 V, I_E=− 4 mA, f=200MHz		80		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E= 0, f= 1 MHz			7	pF
ON Resistance	R_{on} *2			1.0		Ω

*1 h_{FE1} Ranking

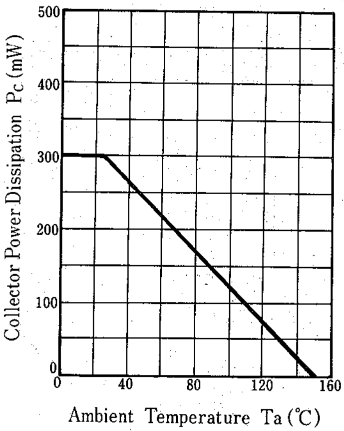
Rank	S	T
h_{FE}	500～1500	800～2500

*2 R_{on} Measurement Circuit

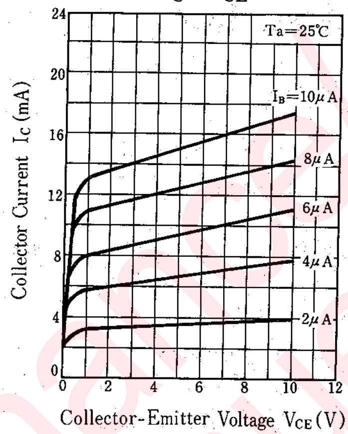


$$R_{on} = \frac{V_B}{V_A - V_B} \times 1000(\Omega)$$

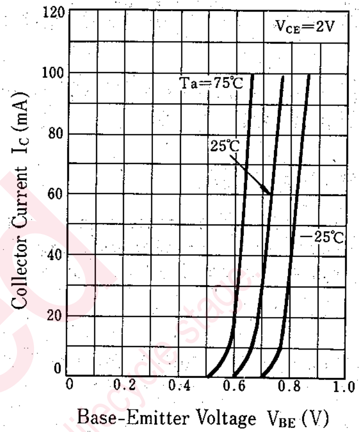
$P_C - Ta$



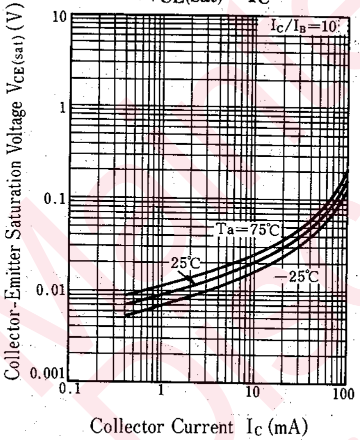
$I_C - V_{CE}$



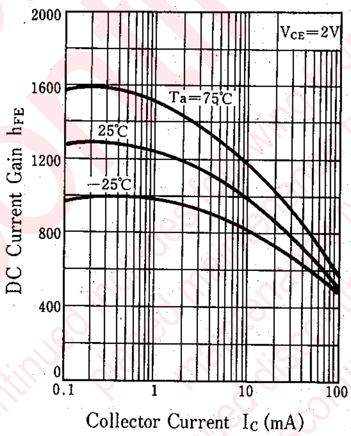
$I_C - V_{BE}$



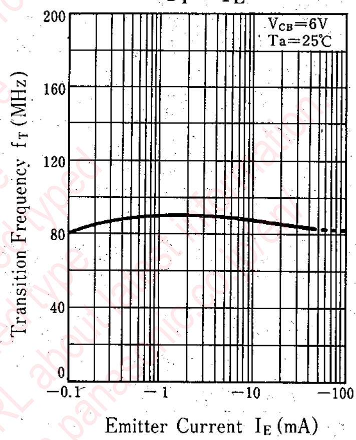
$V_{CE(sat)} - I_C$



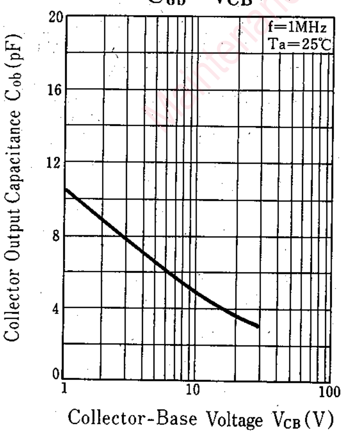
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



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