

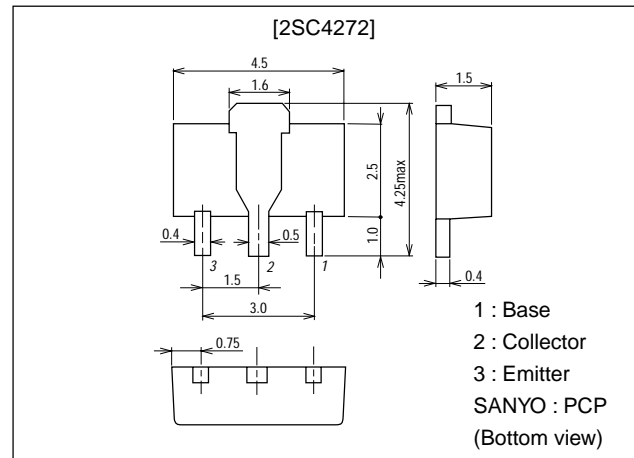
**27MHz CB Transceiver Driver Applications****Features**

- Small size making it easy to provide high-density, small-sized hybrid ICs.

**Package Dimensions**

unit:mm

2038A

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		75	V
Collector-to-Emitter Voltage	$V_{CER}$	$R_{BE}=150\Omega$	75	V
Collector-to-Emitter Voltage	$V_{CEO}$		45	V
Emitter-to-Base Voltage	$V_{EBO}$		5	V
Collector Current	$I_C$		1.0	A
Collector Current (Pulse)	$I_{CP}$		1.5	A
Collector Dissipation	$P_C$	Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm)	1.3	W
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

**Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=40V, I_E=0$			1.0	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			1.0	$\mu A$
DC Current Gain	$h_{FE}^*$	$V_{CE}=5V, I_C=500mA$	60*		320*	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=50mA$	180	250		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		15		pF

\* : The 2SC4272 are classified by 500mA  $h_{FE}$  as follows :

Marking : CH

 $h_{FE}$  rank : D, E, F

60	D	120	100	E	200	160	F	320
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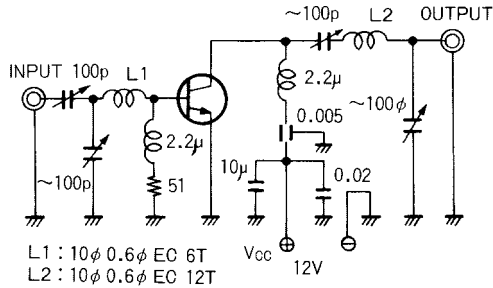
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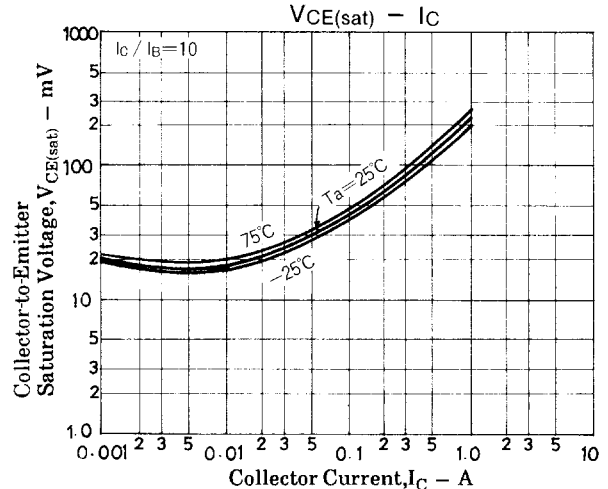
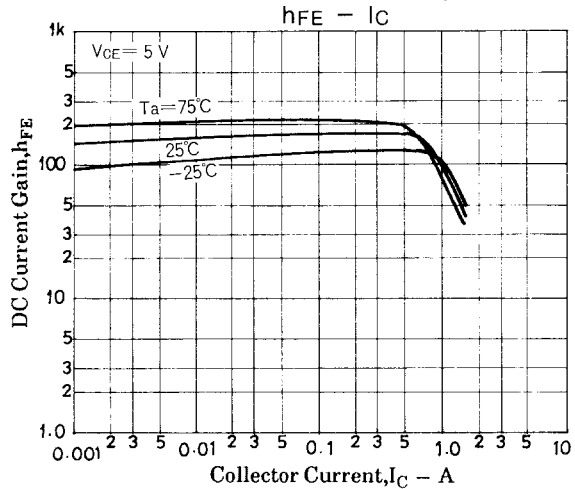
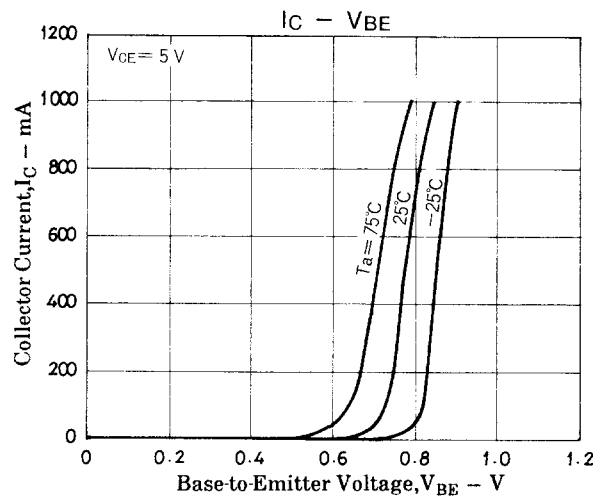
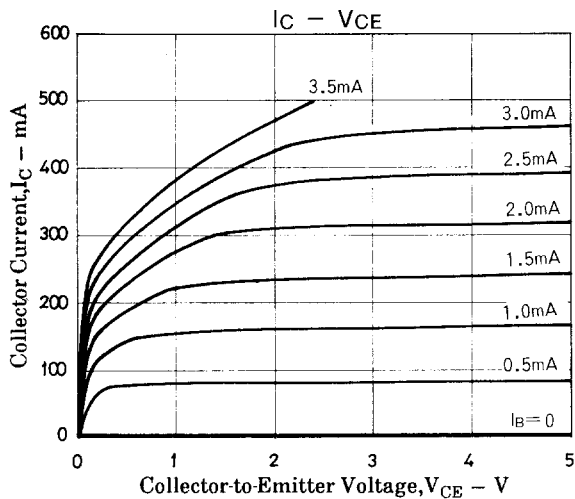
# 2SC4272

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Power	$P_O$	$V_{CC}=12V, f=27MHz, P_{in}=35mW$	1.0	1.8		W
Collector Efficiency	$\eta_c$	See specified test circuit.	60			%
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$		0.2	0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$		0.9	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	75			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CER}$	$I_C=1mA, R_{BE}=150\Omega$	75			V
Collector-to-Base Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	45			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V

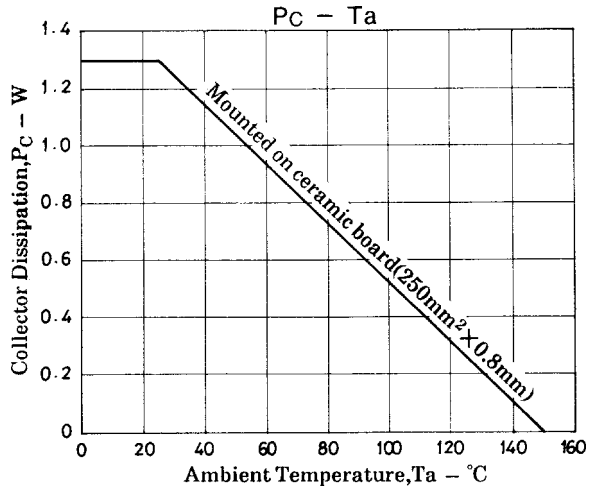
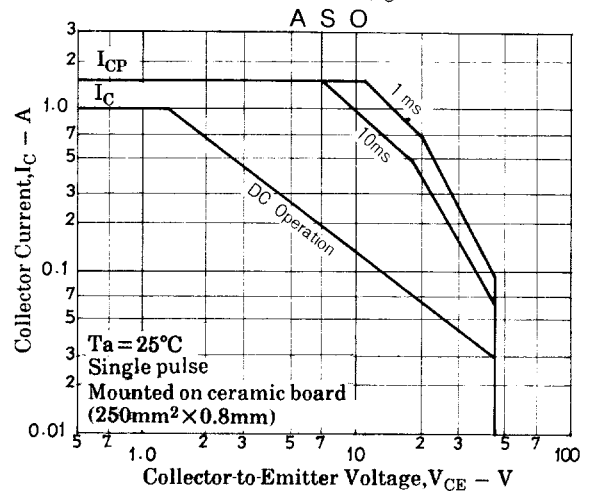
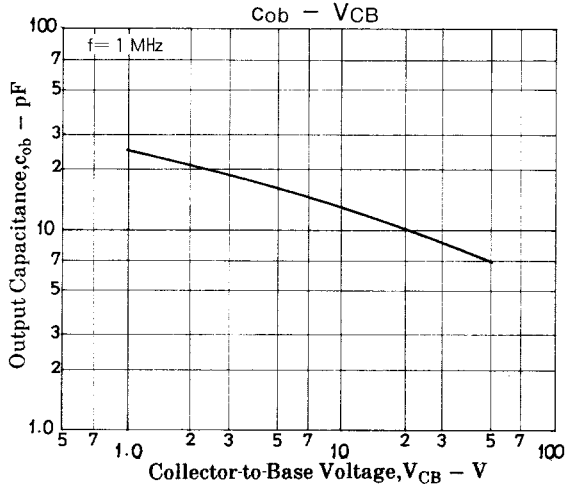
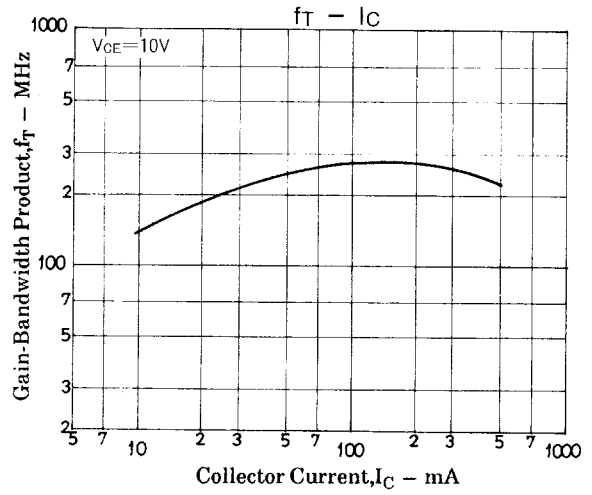
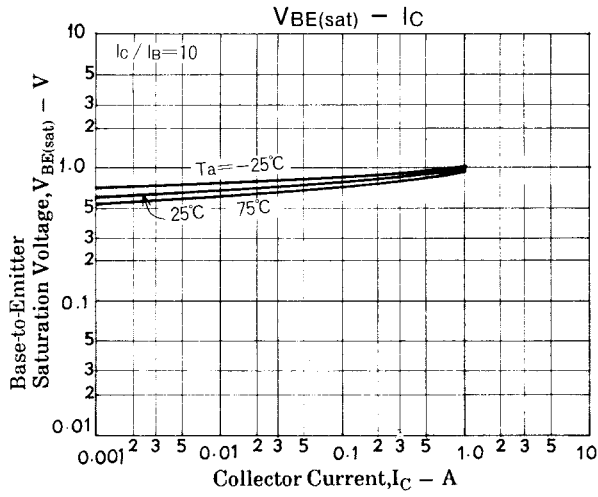
## Collector Efficiency Test Circuit



Unit (resistance : Ω, capacitance : F)



# 2SC4272



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