

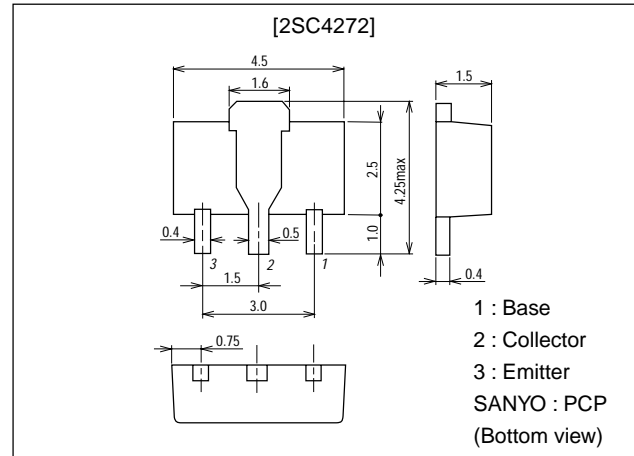
**2SC4272****27MHz CB Transceiver Driver Applications****Features**

- 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 ² ×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	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			1.0	μA
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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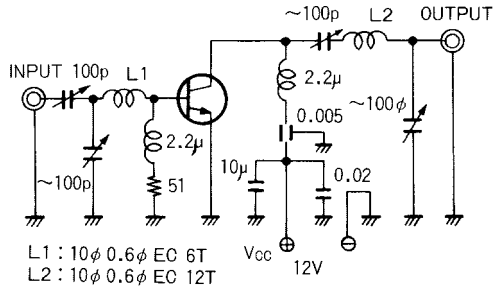
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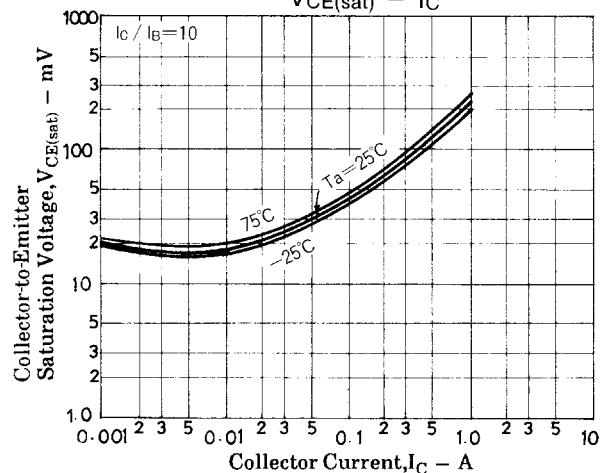
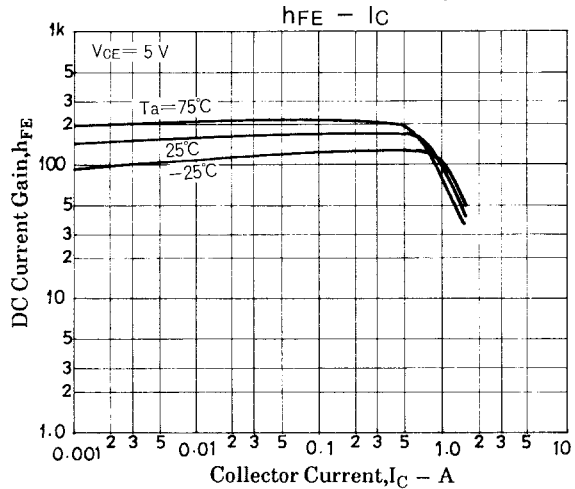
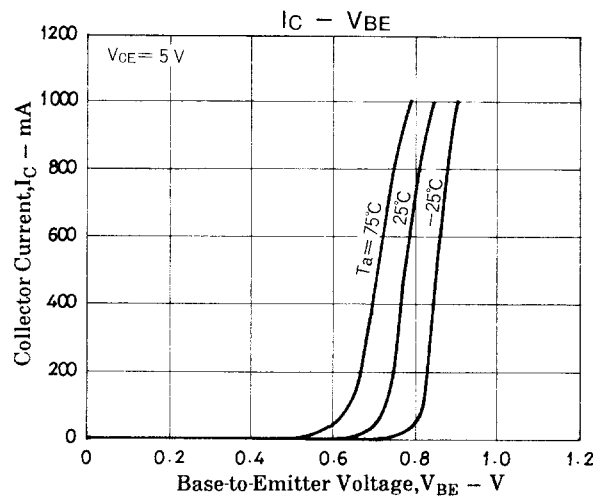
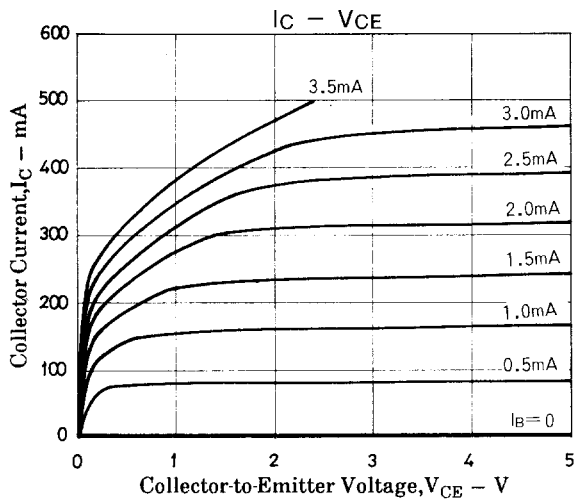
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Power	P_O	$V_{CC}=12V, f=27MHz, P_{in}=35mW$	1.0	1.8		W
Collector Efficiency	η_c	See specified test circuit.	60			%
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$		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

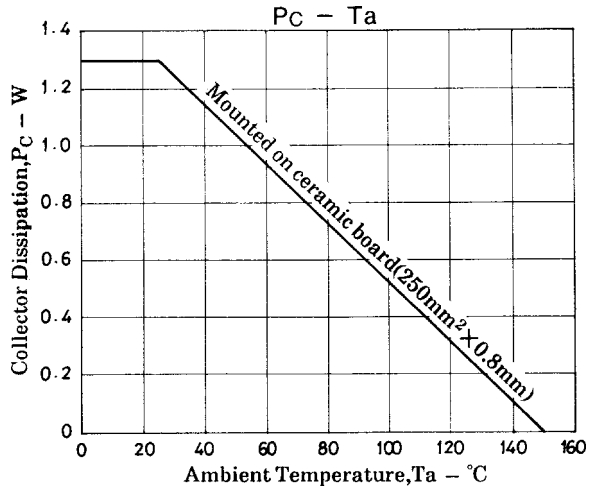
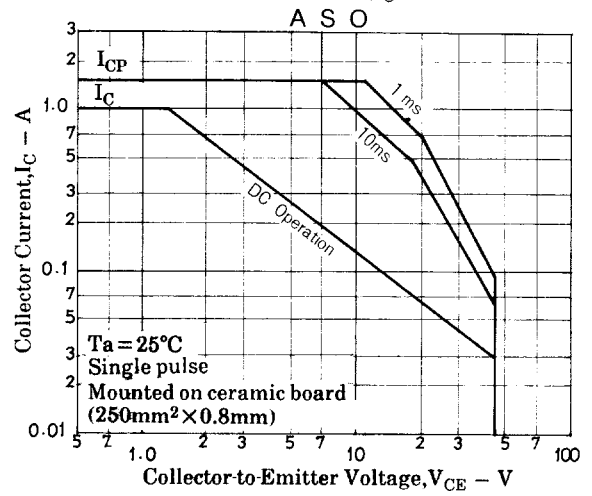
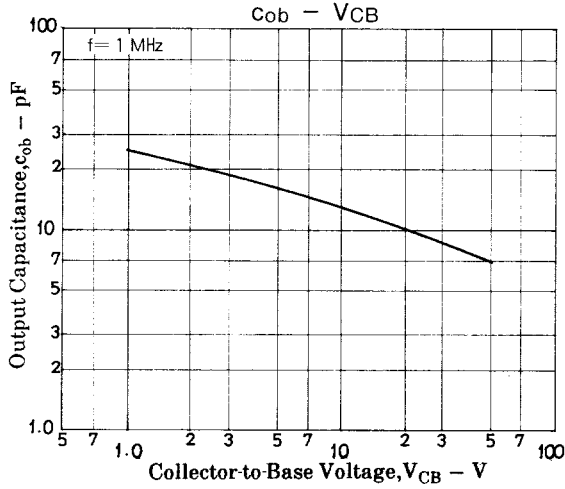
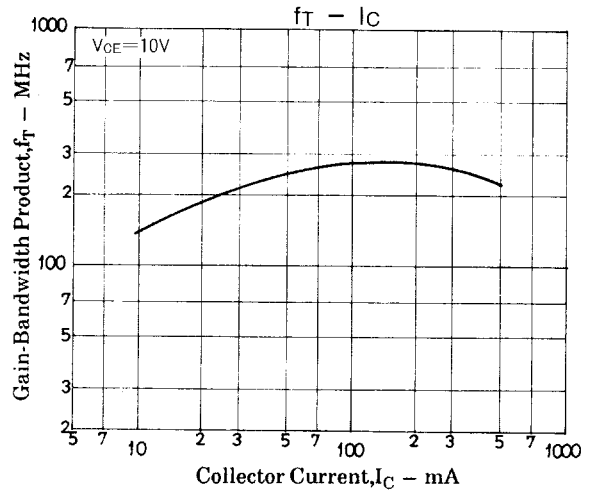
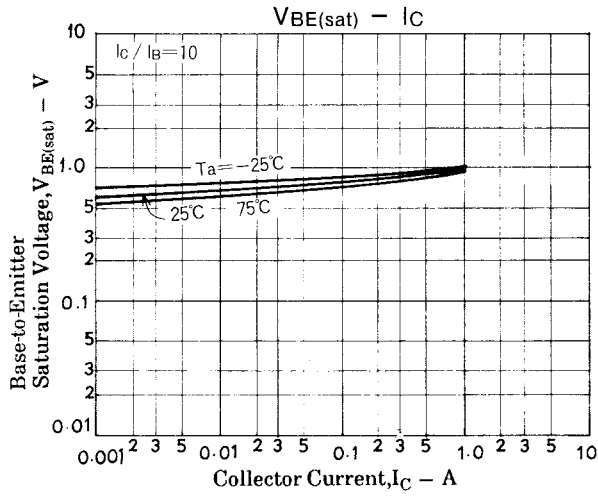
Collector Efficiency Test Circuit



Unit (resistance : Ω, capacitance : F)



2SC4272



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