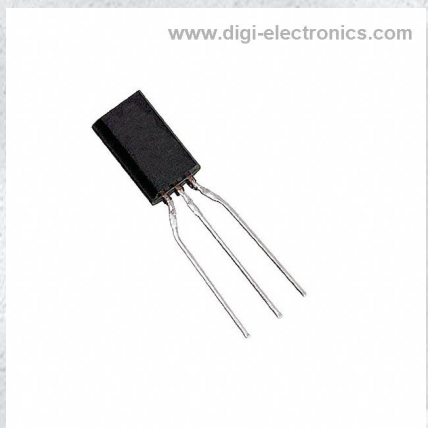
2SC4208ARA Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	2SC4208ARA-DG
Manufacturer	Panasonic Electronic Components
Manufacturer Product Number	2SC4208ARA
Description	TRANS NPN 50V 0.5A TO92NL-A1
Detailed Description	Bipolar (BJT) Transistor NPN 50 V 500 mA 150MHz 1 W Through Hole TO-92NL-A1

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
2SC4208ARA	Panasonic Electronic Components
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	500 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
50 V	600mV @ 30mA, 300mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
-	120 @ 150mA, 10V
Power - Max:	Frequency - Transition:
1 W	150MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-226-3, TO-92-3 Long Body	TO-92NL-A1
Base Product Number:	
2SC4208	

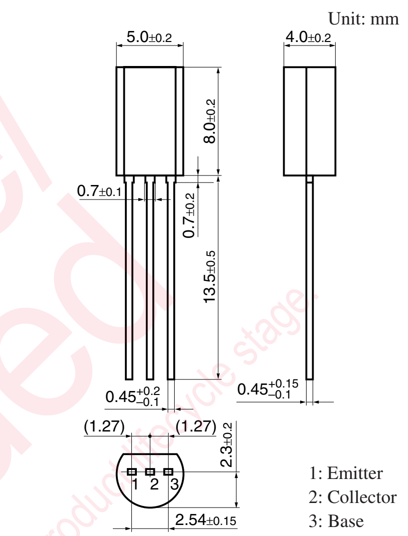
Environmental & Export classification

Moisture Sensitivity Level (MSL):	ECCN:
1 (Unlimited)	EAR99
HTSUS:	
8541.29.0075	

2SC4208, 2SC4208A

Silicon NPN epitaxial planar type

For low-frequency output amplification and driver amplification
Complementary to 2SA1619 and 2SA1619A



TO-92NL-A1 Package

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Output of 1 W is obtained with a complementary pair with 2SA1619 and 2SA1619A
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter		Symbol	Rating	Unit
Collector-base voltage (Emitter open)	2SC4208	V_{CBO}	30	V
	2SC4208A		60	
Collector-emitter voltage (Base open)	2SC4208	V_{CEO}	25	V
	2SC4208A		50	
Emitter-base voltage (Collector open)		V_{EBO}	7	V
Collector current		I_C	500	mA
Peak collector current		I_{CP}	1	A
Collector power dissipation		P_C	1	W
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

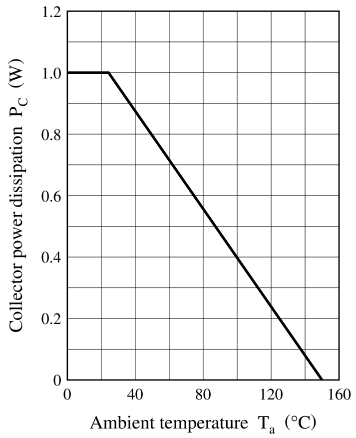
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	2SC4208	V_{CBO}	$I_C = 10\ \mu A$, $I_E = 0$	30			V
	2SC4208A			60			
Collector-emitter voltage (Base open)	2SC4208	V_{CEO}	$I_C = 10$ mA, $I_B = 0$	25			V
	2SC4208A			50			
Emitter-base voltage (Collector open)		V_{EBO}	$I_E = 10\ \mu A$, $I_C = 0$	7			V
Forward current transfer ratio *1		h_{FE1} *2	$V_{CE} = 10$ V, $I_C = 150$ mA	85		340	—
		h_{FE2}	$V_{CE} = 10$ V, $I_C = 500$ mA	40			
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 300$ mA, $I_B = 30$ mA		0.35	0.60	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = 300$ mA, $I_B = 30$ mA		1.1	1.5	V
Transition frequency		f_T	$V_{CB} = 10$ V, $I_E = -50$ mA, f = 200 MHz		150		MHz
Collector output capacitance (Common base, input open circuited)		C_{ob}	$V_{CB} = 10$ V, $I_E = 0$, f = 1 MHz		6	15	pF

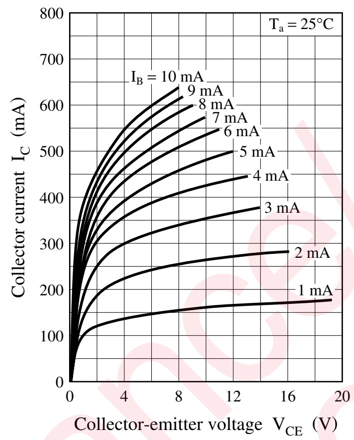
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *1: Pulse measurement
*2: Rank classification

Rank	Q	R	S
h_{FE1}	85 to 170	120 to 240	170 to 340

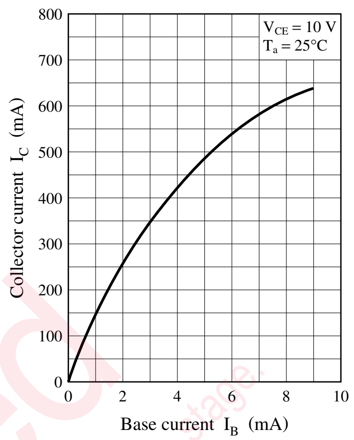
P_C — T_a



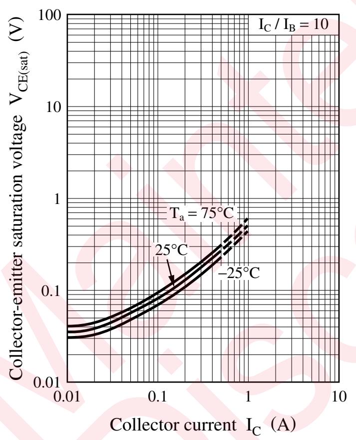
I_C — V_{CE}



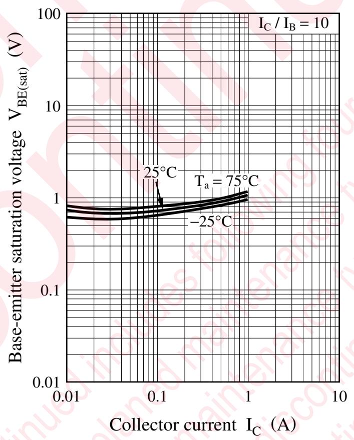
I_C — I_B



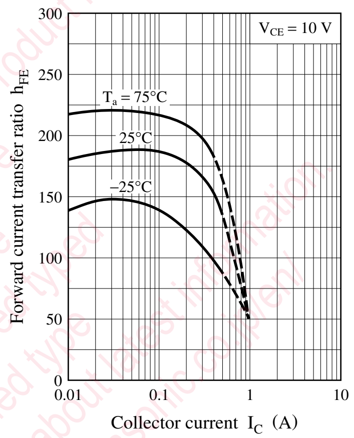
$V_{CE(sat)}$ — I_C



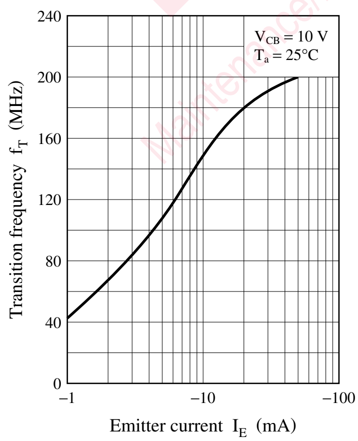
$V_{BE(sat)}$ — I_C



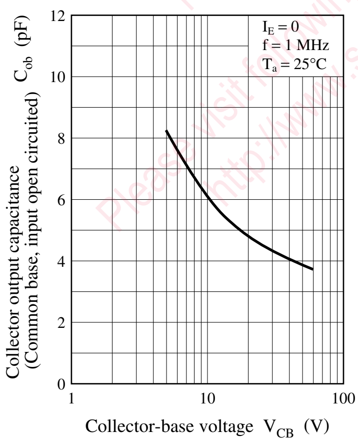
h_{FE} — I_C



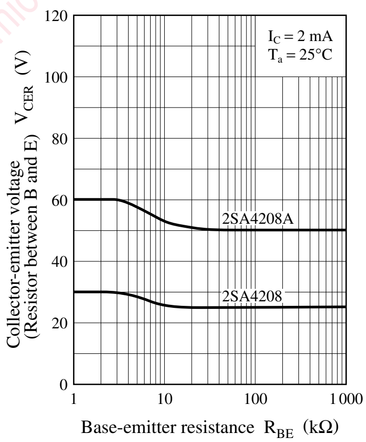
f_T — I_E



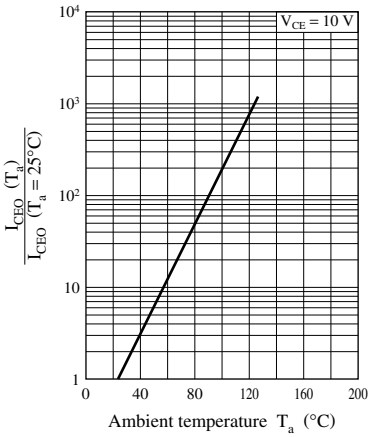
C_{ob} — V_{CB}



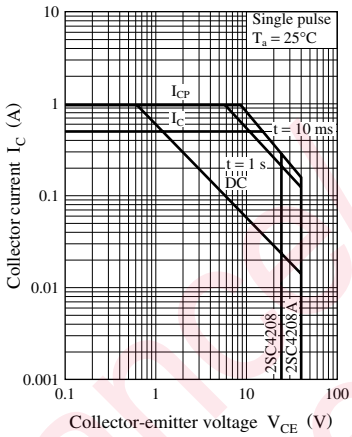
V_{CER} — R_{BE}



I_{CEO} — T_a



Safe operation area



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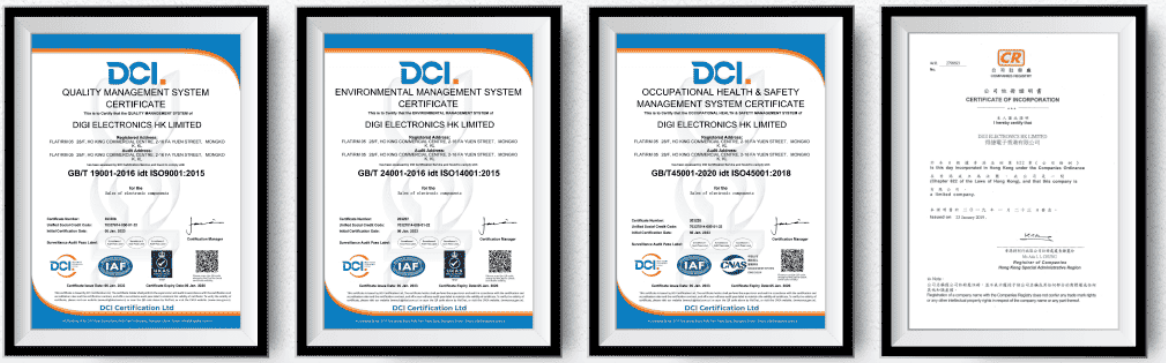

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