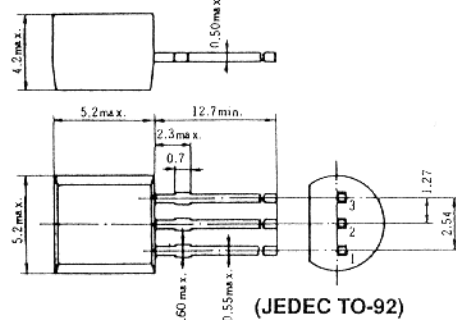


2SC458, 2SC2308

SILICON NPN EPITAXIAL

LOW FREQUENCY AMPLIFIER

Complementary pair with 2SA1029 and 2SA1030

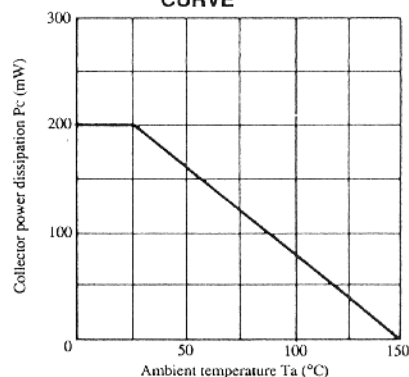


1. Emitter
 2. Collector
 3. Base
- (Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC458	2SC2308	Unit
Collector to base voltage	V _{CB0}	30	55	V
Collector to emitter voltage	V _{CE0}	30	50	V
Emitter to base voltage	V _{EBO}	5	5	V
Collector current	I _C	100	100	mA
Emitter current	I _E	-100	-100	mA
Collector power dissipation	P _C	200	200	mW
Junction temperature	T _j	150	150	°C
Storage temperature	T _{stg}	-55 to +150	-55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	2SC458			2SC2308			Unit
			min.	typ.	max.	min.	typ.	max.	
Collector to base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	30	—	—	55	—	—	V
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	30	—	—	50	—	—	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	5	—	—	5	—	—	V
Collector cutoff current	I _{CBO}	V _{CB} = 18V, I _E = 0	—	—	0.5	—	—	0.5	μA
Emitter cutoff current	I _{EBO}	V _{EB} = 2V, I _C = 0	—	—	0.5	—	—	0.5	μA
DC current transfer ratio	h _{FE} *	V _{CE} = 12V, I _C = 2mA	100	—	500	100	—	320	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 10mA, I _B = 1mA	—	—	0.2	—	—	0.2	V
Base to emitter voltage	V _{BE}	V _{CE} = 12V, I _C = 2mA	—	0.67	0.75	—	0.67	0.75	V
Gain bandwidth product	f _r	V _{CE} = 12V, I _C = 2mA	—	230	—	—	230	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	1.8	3.5	—	1.8	3.5	pF
Noise figure	NF	V _{CE} = 6V, I _C = 0.1mA, f = 1kHz, R _g = 500Ω	—	4	10	—	4	10	dB
Small signal input impedance	h _{ie}	V _{CE} = 5V, I _C = 0.1mA, f = 270Hz	—	16.5	—	—	16.5	—	kΩ
Small signal voltage feedback ratio	h _{re}		—	70	—	—	70	—	× 10 ⁻⁶
Small signal current transfer ratio	h _{fe}		—	130	—	—	130	—	
Small signal output admittance	h _{oe}		—	11.0	—	—	11.0	—	μS

* The 2SC458 and 2SC2308 are grouped by h_{FE} as follows.

	B	C	D
2SC458	100 to 200	160 to 320	250 to 500
2SC2308	100 to 200	160 to 320	—

■ See characteristic curves of 2SC458 (LG) and 2SC2310 except for the followings.

