

Description

Silicon NPN transistor in a TO-92 Plastic Package

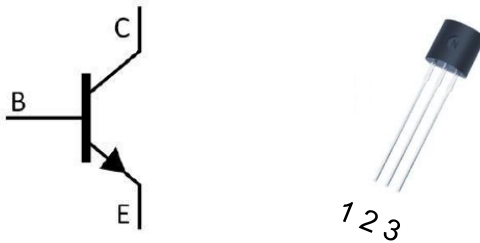
Features

- Excellent h_{FE} linearity
- Low noise
- Complementary pair with KTA1266

Applications

General amplifier and switching application

Symbol	Parameter	Max	Unit
V_{CE0}	collector-emitter voltage	50	V
I_C	collector current (DC)	150	mA

Equivalent Circuit & Pinning


PIN1: Collector

PIN 2: Base

PIN 3: Emitter

 h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	O	Y	GR	BL
h_{FE} Range	70~140	120~240	200~400	300~700

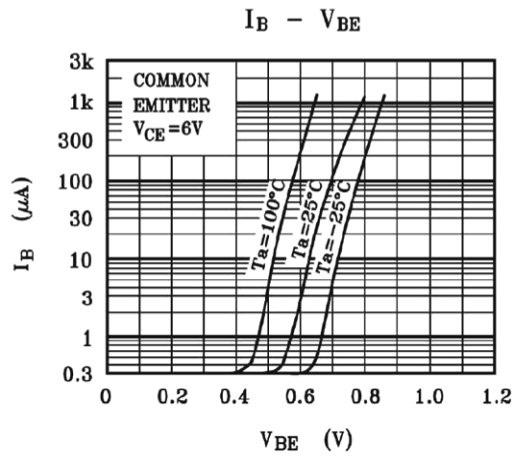
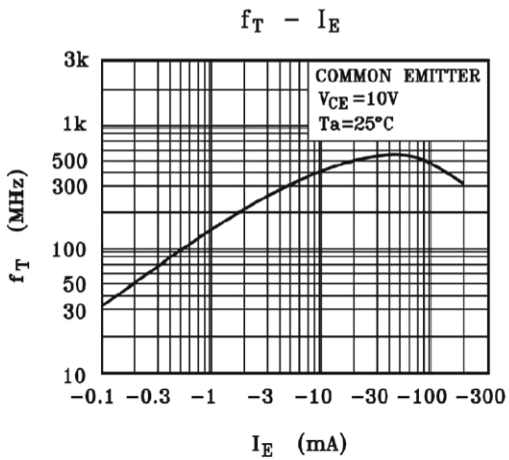
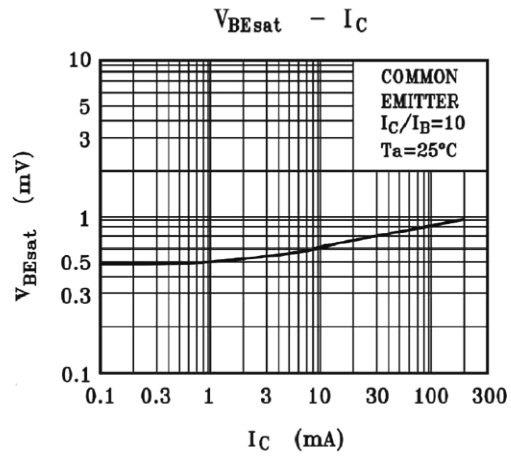
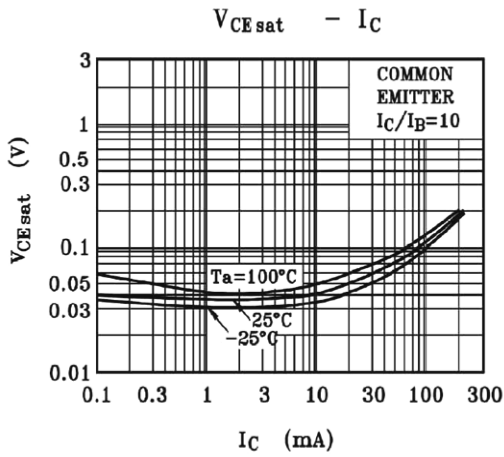
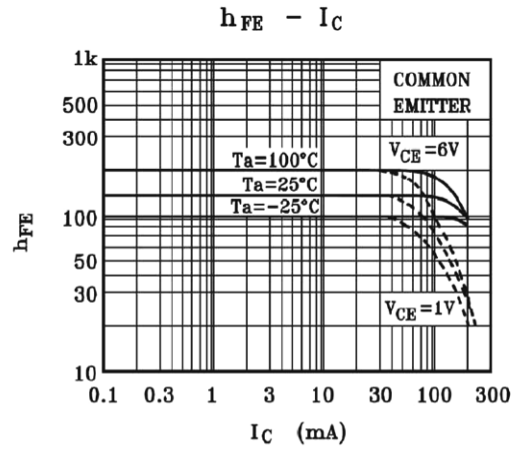
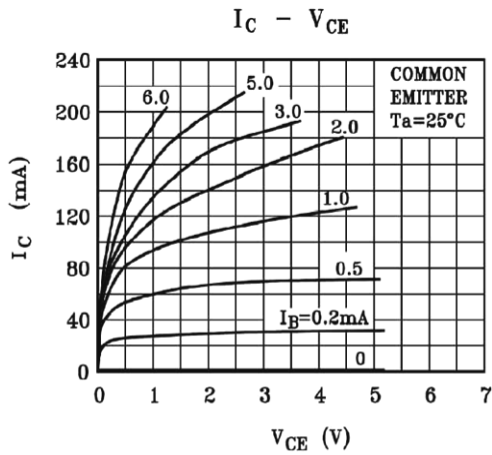
Absolute Maximum Ratings(Ta=25°C)

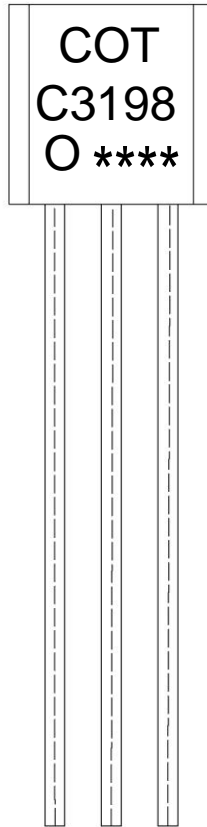
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	150	mA
Base Current - Continuous	I_B	50	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

Electrical Characteristic (Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60V$ $I_E=0$			0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=6.0V$ $I_C=2.0mA$	70		700	
	$h_{FE(2)}$	$V_{CE}=6.0V$ $I_C=150mA$	25	100		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA$ $I_B=10mA$		0.1	0.25	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA$ $I_B=10mA$			1.0	V
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=1.0mA$	80			MHz
Collector Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		2.0	3.5	pF
Noise Figure	NF	$V_{CE}=6.0V$ $I_C=0.1mA$ $R_g=10K\Omega$ $f=1.0KHz$		1.0	10	dB
Collector- Base Time Constant	$r_{bb'}$	$V_{CB}=10V$ $I_C=1.0mA$ $f=30MHz$		50		Ω

Electrical Characteristic Curve



Marking Instructions


Note:

COT: Company Code.

C3198: Product Type.

O: hFE Classifications Symbol

****: Lot No. Code, code change with Lot No.

h _{FE} Classifications Symbol	O	Y	GR	BL
h _{FE} Range	70~140	120~240	200~400	300~700

Packaging SPEC.
BULK

Package Type	Units					Dimension (unit: mm3)		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

AMMO

Package Type	Units					Dimension (unit: mm3)	
	Units/tape	Tape/Inner Box	Rows/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Inner Box	Outer Box
TO-92	3,000	1	120	10	30,000	328×230×42	480×346×235, 547×407×268

Package Outline Dimensions

TO-92

Unit: mm

