



TIP122-Q

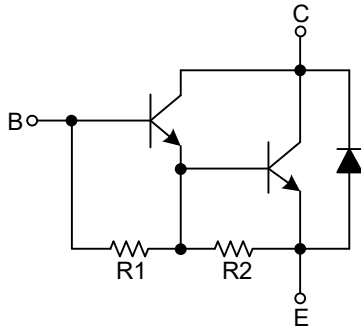
NPN SILICON TRANSISTOR

NPN EPITAXIAL TRANSISTOR

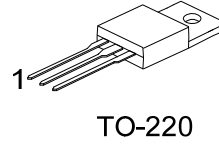
DESCRIPTION

The UTC **TIP122-Q** is a NPN epitaxial transistor, designed for use in general purpose amplifier low-speed switching applications.

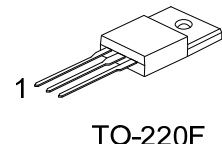
EQUIVALENT TEST



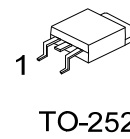
($R_1 \approx 15k\Omega$, $R_2 \approx 0.05k\Omega$)



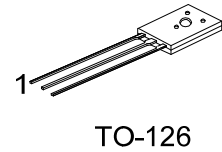
TO-220



TO-220F



TO-252



TO-126

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TIP122L-Q-TA3-T	TIP122G-Q-TA3-T	TO-220	B	C	E	Tube
TIP122L-Q-TF3-T	TIP122G-Q-TF3-T	TO-220F	B	C	E	Tube
TIP122L-Q-TN3-R	TIP122G-Q-TN3-R	TO-252	B	C	E	Tape Reel
TIP122L-Q-T60-T	TIP122G-Q-T60-T	TO-126	B	C	E	Tube
TIP122L-Q-T60-K	TIP122G-Q-T60-K	TO-126	B	C	E	Bulk

Note: Pin Assignment: B: Base C: Collector E: Emitter

TIP122G-Q-TA3-T (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube, R: Tape Reel, K: Bulk (2) TA3: TO-220, TF3: TO-220F, TN3: TO-252 T60: TO-126 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

TO-220 / TO-252	TO-126
UTC Version Code ← TIP122 □ Lot Code ← Q □ □ □ □ □ □ □ □ → Date Code 1 L: Lead Free G: Halogen Free	UTC □ □ □ □ Version Code ← Q TIP122 □ → Date Code 1 L: Lead Free G: Halogen Free

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector to Base Voltage		V _{CBO}	100	V
Collector to Emitter Voltage		V _{CEO}	100	V
Emitter to Base Voltage		V _{EBO}	5	V
IC Collector Current	DC	I _C	5	A
	Pulse	I _{CP}	8	A
Power Dissipation (T _C =25°C)	TO-220	P _D	65	W
	TO-220F		30	W
	TO-252		38	W
	TO-126		10	W
Junction Temperature		T _J	+150	°C
Storage Temperature		T _{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

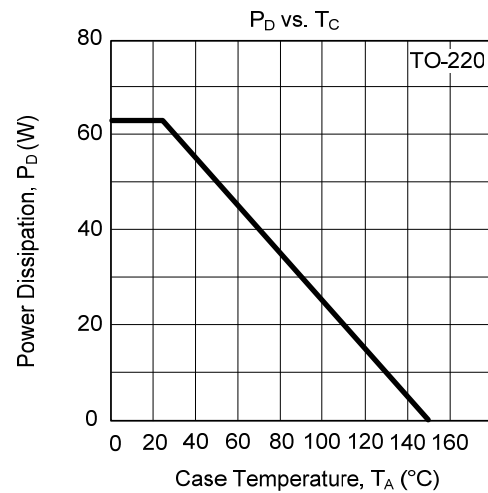
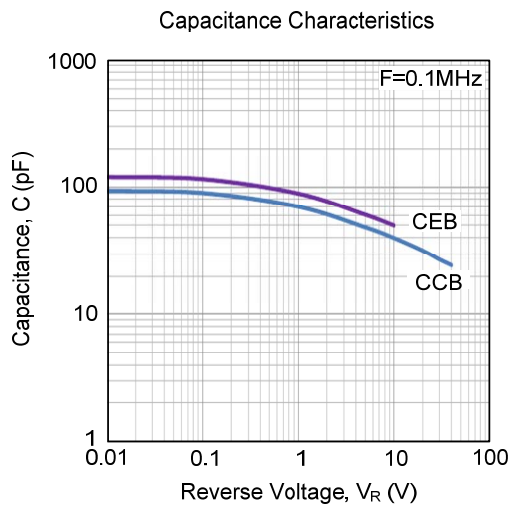
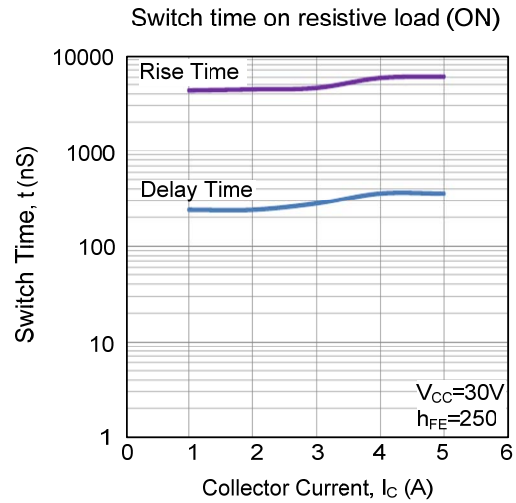
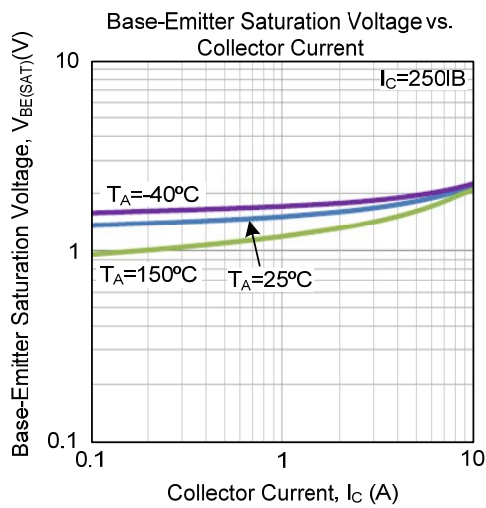
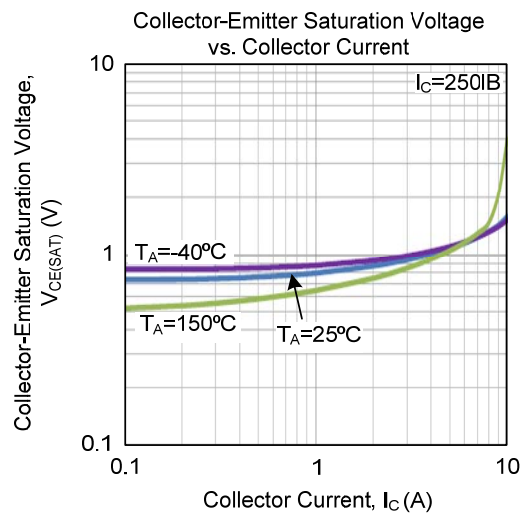
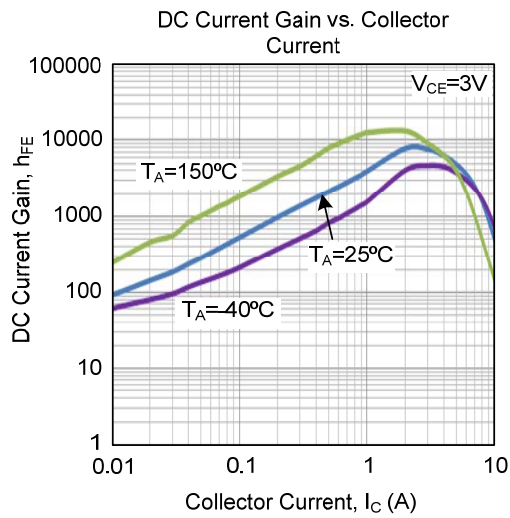
■ THERMAL DATA

PARAMETER		SYMBOL	RATING	UNIT
Junction to Ambient	TO-220	θ _{JA}	62.5	°C/W
	TO-220F			
	TO-252		80	°C/W
	TO-126		89	°C/W
Junction to Case	TO-220	θ _{JC}	1.92	°C/W
	TO-220F		4.16	°C/W
	TO-252		3.29	°C/W
	TO-126		12.5	°C/W

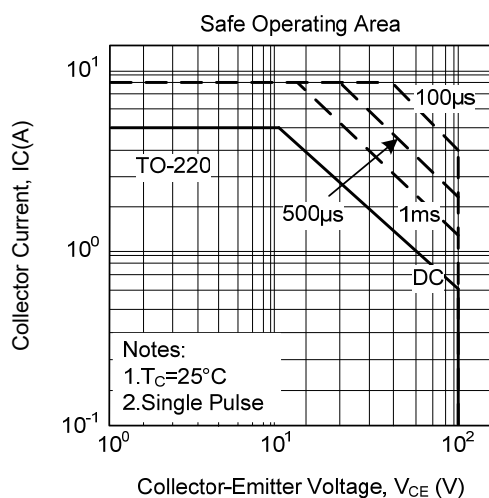
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =100mA	100			V
Collector-Emitter Saturation Voltage	V _{CE(SAT)1}	I _C =3A, I _B =12mA			2	V
Collector-Emitter Saturation Voltage	V _{CE(SAT)2}	I _C =5A, I _B =20mA			4	V
Base-Emitter Saturation Voltage	V _{BE(ON)}	V _{CE} =3V, I _C =3A			2.5	V
Collector Cut-Off Current	I _{CBO}	V _{CB} =100V			200	uA
Collector Cut-Off Current	I _{CEO}	V _{CE} =50V			500	uA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =5V			2	mA
DC Current Gain	h _{FE}	I _C =500mA, V _{CE} =3V	1000			
		I _C =3A, V _{CE} =3V	1000			

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS



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