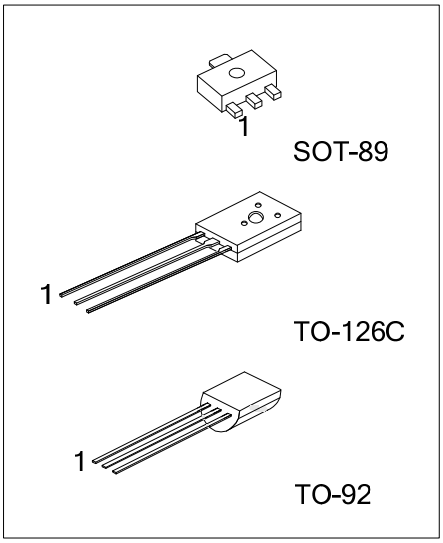
2N6718

NPN SILICON TRANSISTOR

NPN GENERAL PLANAR TRANSISTOR



■ DESCRIPTION

The UTC **2N6718** is designed for general purpose medium power amplifier and switching applications.

■ FEATURES

* High Power: 850mW
* High Current: 1A

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N6718L-x-AB3-R	2N6718G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2N6718L-x-T6C-K	2N6718G-x-T6C-K	TO-126C	E	C	B	Bulk
2N6718L-x-T92-B	2N6718G-x-T92-B	TO-92	E	C	B	Tape Box
2N6718L-x-T92-K	2N6718G-x-T92-K	TO-92	E	C	B	Bulk

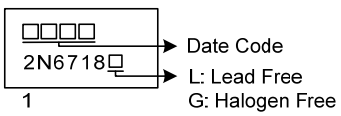
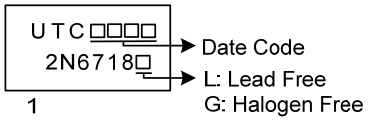
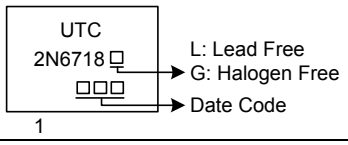
Note: Pin Assignment: B: Base C: Collector E: Emitter

2N6718G-x-AB3-R

(1)Packing Type
(2)Package Type
(3)Rank
(4)Green Package

(1) R: Tape Reel, B: Tape Box, K: Bulk
(2) AB3: SOT-89, T6C: TO-126C, T92: TO-92
(3) x: refer to Classification of h_{FE2}
(4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-89	TO-126C	TO-92
		

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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	100	V
Collector-Emitter Voltage		V_{CEO}	100	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current (Continue)		I_C	1	A
Collector Current (Pulse)		I_C	2	A
Total Power Dissipation	SOT-89	P_D	1 (Note 2)	W
	TO-126C		1.6	W
	TO-92		850	mW
Junction Temperature		T_J	+150	°C
Operating Temperature		T_{OPR}	-40 ~ +125	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Notes: 1. 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.
2. Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

■ THERMAL DATA

PARAMETER		SYMBOL	RATING	UNIT
Junction to Ambient	SOT-89	θ_{JA}	125	°C/W
	TO-126C		78	°C/W
	TO-92		147	°C/W
Junction to Case	SOT-89	θ_{JC}	70	°C/W
	TO-126C		6.25	°C/W
	TO-92		80	°C/W

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100uA	100			V
Collector-Emitter Breakdown Voltage (note)	BV_{CEO}	I_C=1mA	100			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA	5			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=350mA, I_B=35mA			350	mV
Collector Cut-Off Current	I_{CBO}	V_{CB}=80V			100	nA
DC Current Gain	h_{FE1}	V_{CE}=1V, I_C=50mA	80			
	h_{FE2}	V_{CE}=1V, I_C=250mA	50		300	
	h_{FE3}	V_{CE}=1V, I_C=500mA	20			
Current Gain - Bandwidth Product	f_T	V_{CE}=10V, I_C=50mA, f=100MHz	50			MHz
Output Capacitance	Cob	V_{CB}=10V, I_E=0, f=1MHz			20	pF

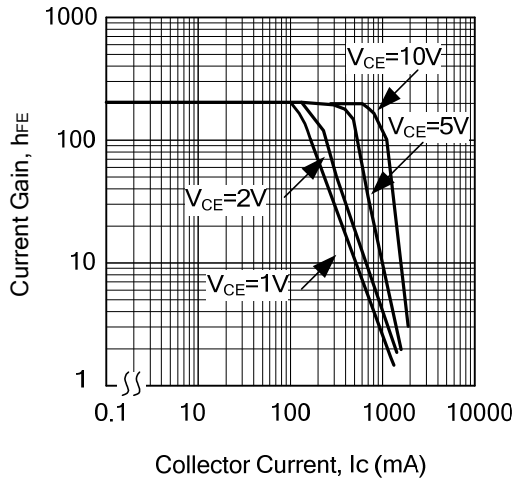
Note: Pulse test: PulseWidth≤380μs, Duty Cycle≤2%

■ CLASSIFICATION OF h_{FE2}

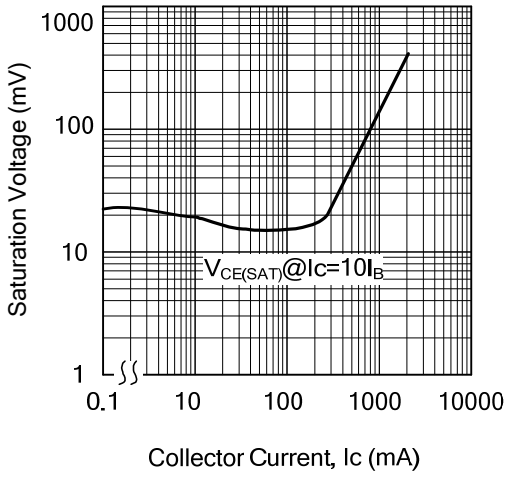
RANK	A	B
RANGE	50~115	95~300

■ TYPICAL CHARACTERISTICS

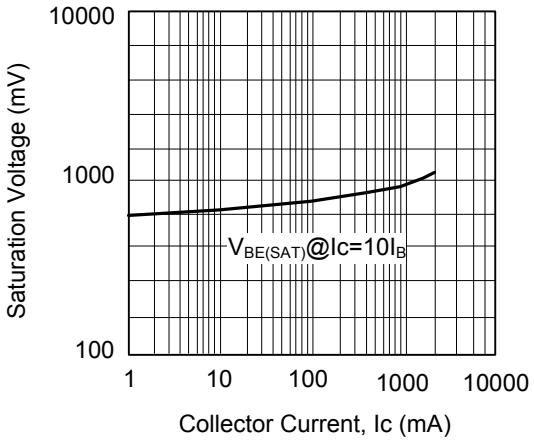
Current Gain vs. Collector Current



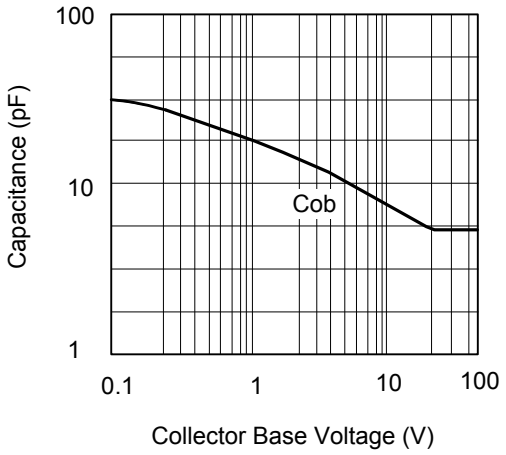
Saturation Voltage vs. Collector Current



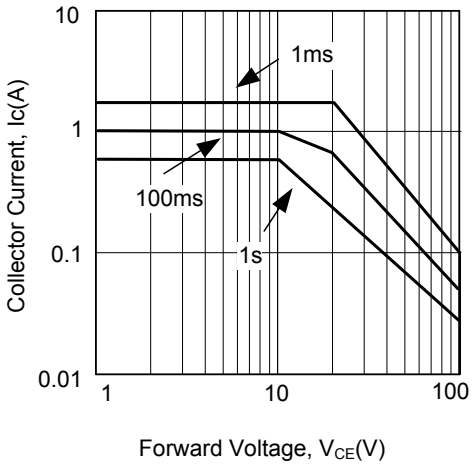
Saturation Voltage vs. Collector Current



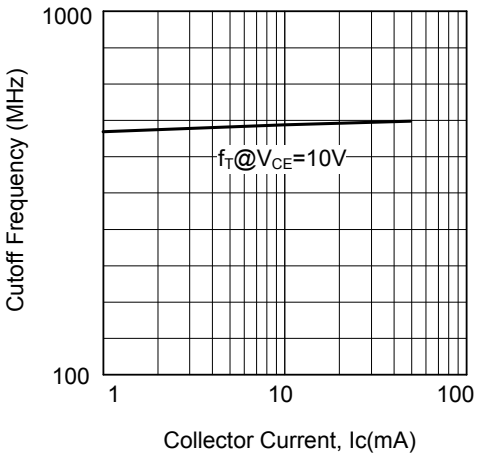
Collector Output Capacitance



Safe Operating Area



Cutoff Frequency vs. Collector Current



■ TYPICAL CHARACTERISTICS