



# 2N6718

## NPN SILICON TRANSISTOR

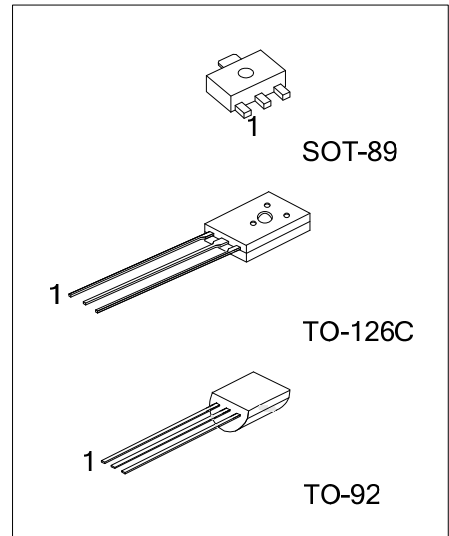
### NPN GENERAL PLANAR TRANSISTOR

■ **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

<p>2N6718G-x-AB3-R</p>	<p>(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 <math>h_{FE2}</math>          (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ **MARKING**

SOT-89	TO-126C	TO-92

■ ABSOLUTE MAXIMUM RATING ( $T_A=25^{\circ}\text{C}$ , 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	$^{\circ}\text{C}$
Operating Temperature		$T_{OPR}$	-40 ~ +125	$^{\circ}\text{C}$
Storage Temperature		$T_{STG}$	-55 ~ +150	$^{\circ}\text{C}$

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	$\theta_{JA}$	125	$^{\circ}\text{C/W}$
	TO-126C		78	$^{\circ}\text{C/W}$
	TO-92		147	$^{\circ}\text{C/W}$
Junction to Case	SOT-89	$\theta_{JC}$	70	$^{\circ}\text{C/W}$
	TO-126C		6.25	$^{\circ}\text{C/W}$
	TO-92		80	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

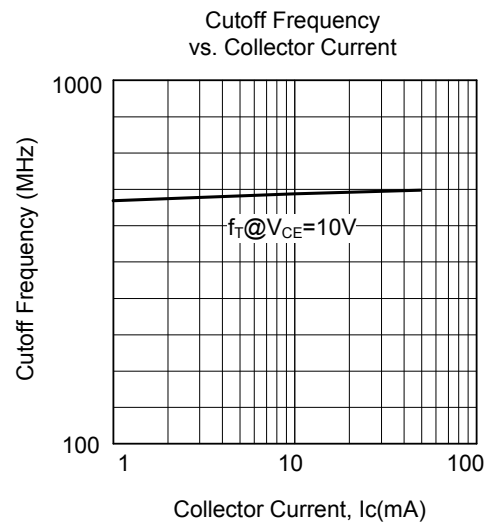
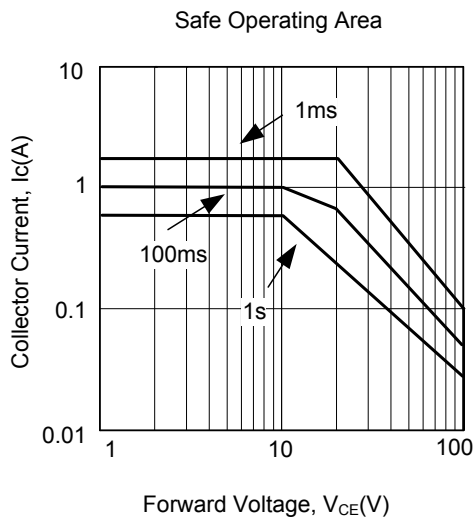
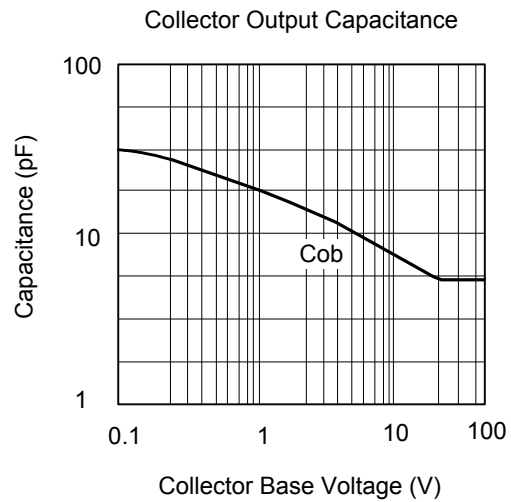
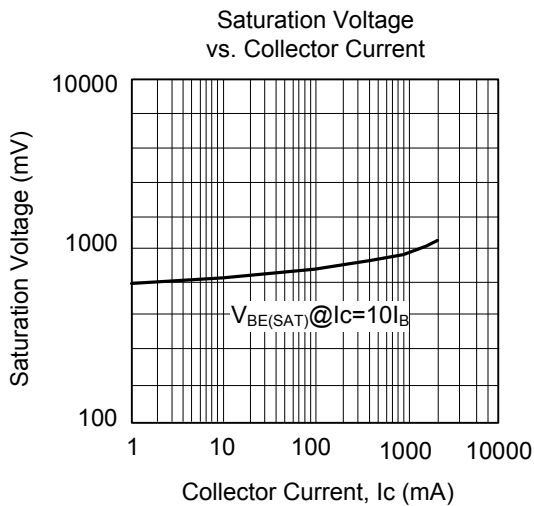
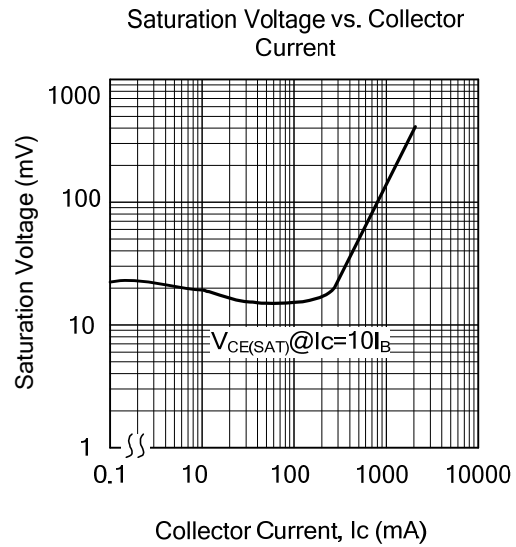
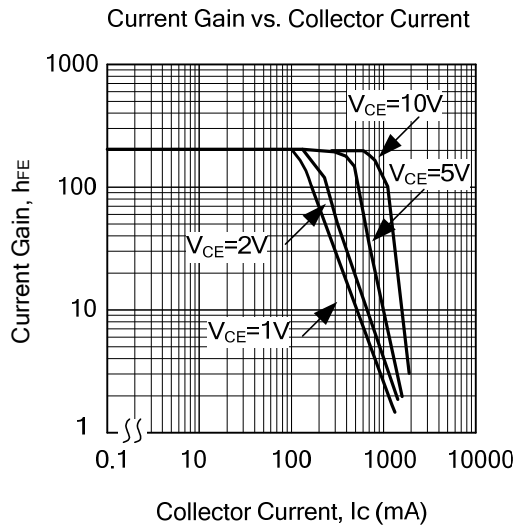
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C=100\mu\text{A}$	100			V
Collector-Emitter Breakdown Voltage (note)	$BV_{CEO}$	$I_C=1\text{mA}$	100			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\mu\text{A}$	5			V
Collector-Emitter Saturation Voltage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

Note: Pulse test: PulseWidth $\leq 380\mu\text{s}$ , Duty Cycle $\leq 2\%$

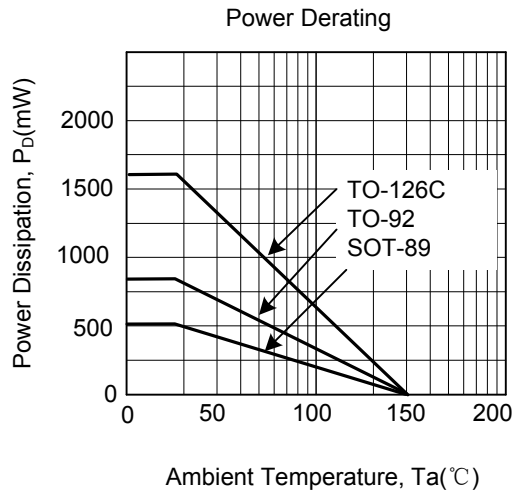
■ CLASSIFICATION OF  $h_{FE2}$

RANK	A	B
RANGE	50~115	95~300

## TYPICAL CHARACTERISTICS



### ■ TYPICAL CHARACTERISTICS



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