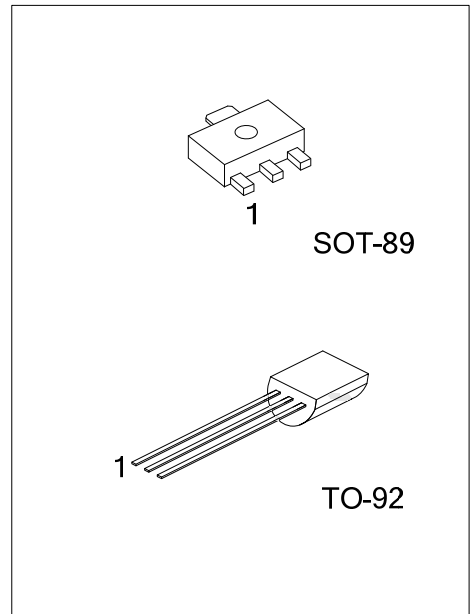




**2SC2881**

**NPN SILICON TRANSISTOR**

VOLTAGE AMPLIFIER  
 APPLICATIONS POWER  
 AMPLIFIER APPLICATIONS



■ FEATURES

- \* High voltage:  $V_{CE0}=120V$
- \* High transition frequency:  $f_T=120MHz$  (typ.)
- \* Complementary to 2SA1201

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	2SC2881G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SC2881L-x-T92-B	2SC2881G-x-T92-B	TO-92	B	C	E	Tape Box
2SC2881L-x-T92-K	2SC2881G-x-T92-K	TO-92	B	C	E	Bulk

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

<p>2SC2881G-x-AB3-R</p>	<p>(1) R: Tape Reel, B: Tape Box, K: Bulk</p> <p>(2) AB3: SOT-89, T92: TO-92</p> <p>(3) x: refer to Classification of <math>h_{FE}</math></p> <p>(4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-89	TO-92

■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-base voltage		$V_{CBO}$	120	V
Collector-emitter voltage		$V_{CEO}$	120	V
Emitter-base voltage		$V_{EBO}$	5	V
Collector current		$I_C$	800	mA
Base current		$I_B$	160	mA
Collector power dissipation	SOT-89	$P_C$	500	mW
	TO-92		600	mW
Junction temperature		$T_J$	150	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-55 ~ 150	$^\circ\text{C}$

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.

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

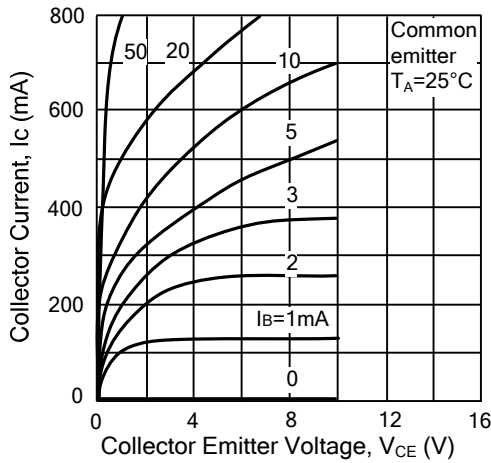
PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	120			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=120\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=100\text{mA}$	80		240	
Collector-emitter saturation voltage	$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.0	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=5\text{V}, I_C=500\text{mA}$			1.0	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=100\text{mA}$		120		MHz
Collector output capacitance	$C_{OB}$	$V_{CB}=10\text{V}, f=1\text{MHz}, I_E=0$			30	pF

■ CLASSIFICATION OF  $h_{FE}$

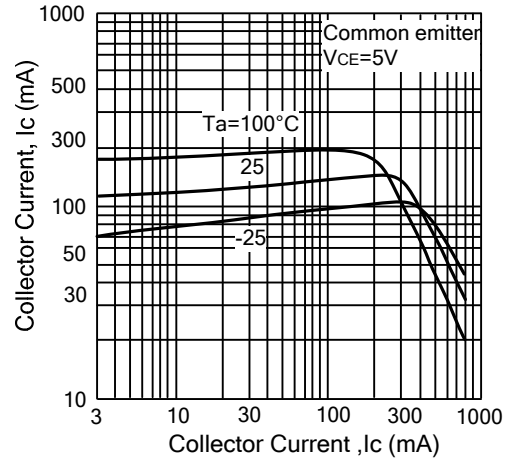
RANK	O	Y
RANGE	80 - 160	120 - 240

## TYPICAL PERFORMANCE CHARACTERISTICS

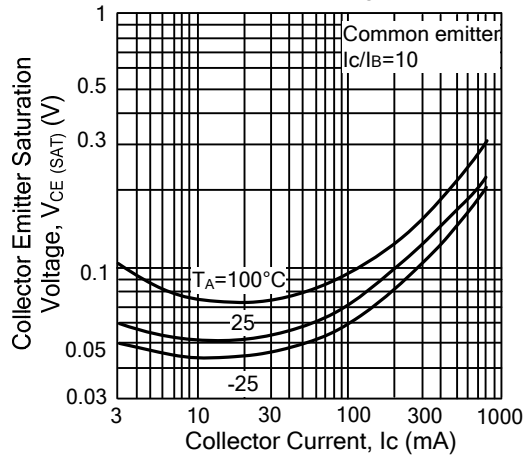
Collector Current vs. Collector Emitter Voltage



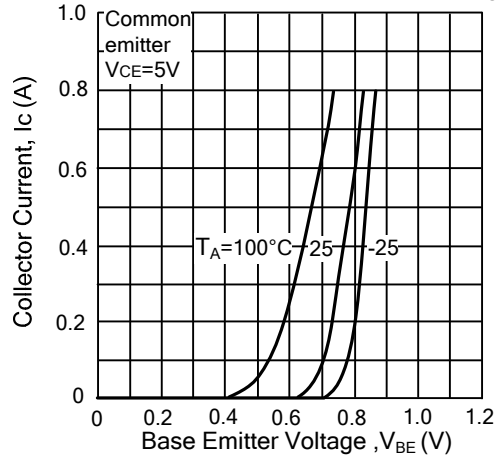
Collector Current vs. Collector Current



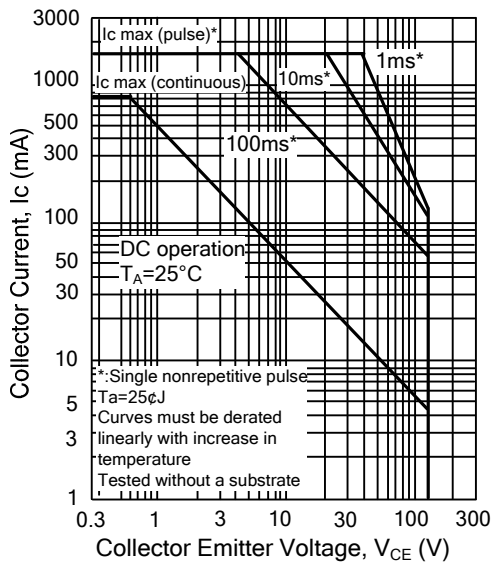
Collector Emitter Saturation Voltage vs. Collector Current



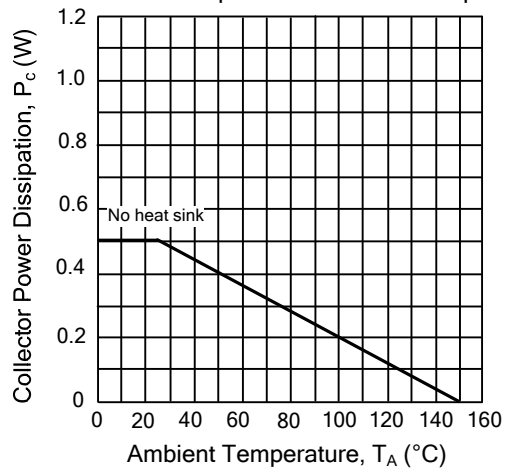
Collector Current vs. Base Emitter Voltage



Collector Current vs. Collector Emitter Voltage



Collector Power Dissipation vs. Ambient Temperature



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