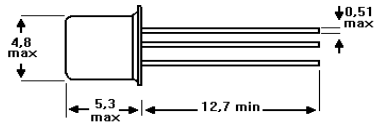


**2N2646**  
**2N2647**

## SILICON UNIJUNCTION TRANSISTORS

Silicon Planar Unijunction Transistors have a structure resulting in lower saturation voltage, peak-point current and valley current as well as a much higher base-one peak pulse voltage. In addition, these devices are much faster switches.

The 2N2646 is intended for general purpose industrial applications where circuit economy is of primary importance, and is ideal for use in firing circuits for Silicon Controlled Rectifiers and other applications where a guaranteed minimum pulse amplitude is required. The 2N2647 is intended for applications where a low emitter leakage current and a low peak point emitter current (trigger current) are required and also for triggering high power SCR's.



CASE



### MAXIMUM RATINGS (\*)

$T_J=125^{\circ}\text{C}$  unless otherwise noted

Symbol	Ratings	2N2646	2N2647
$V_{B1E}$	Base 1 – Emitter Voltage	30	V
$V_{B2E}$	Base 2 – Emitter Voltage	30	V
$I_{FRMS}$	RMS Emitter Current	50	mA
$I_{EM}$	Emitter Peak Current	2	A
$P_{TOT}$	Total Power Dissipation	300	mW
$T_J$	Maximum Junction	150	°C
$T_{STG}$	Storage Temperature Range	-55 to +175	

### ELECTRICAL CHARACTERISTICS

$T_J=25^{\circ}\text{C}$  unless otherwise noted,  $R_{GK}=1000\Omega$

Symbol	Ratings	2N2646 – 2N2647		
		Min	Max	
$I_{EO}$	Emitter Reverse Current		12	$\mu\text{A}$
$V_{(BR)B1E}$	Base 1 – Emitter Breakdown Voltage $I_E=100\mu\text{A}$	30		V

# 2N2646

# 2N2647

Symbol	Ratings		2N2646 – 2N2647		
			Min	Max	
$R_{BBO}$	Interbase Resistance $V_{B1B2} = 3\text{ V}$		4.7	9.1	$k\Omega$
$\eta$	Intrinsic stand-off ratio $V_{B1B2} = 10\text{ V}$	2N2646	0.56	0.75	-
		2N2647	0.68	0.82	
$V_{E(SAT)}$	Emitter Saturation Voltage $I_E = 50\text{ mA}, V_{B1B2} = 10\text{ V}$		-	2.5	V
$I_V$	Valley Current $V_{B1B2} = 20\text{ V}$	2N2646	4	-	mA
		2N2647	8	-	
$I_P$	Peak Current $V_{B1B2} = 25\text{ V}$	2N2646	-	5	$\mu\text{A}$
		2N2647	-	2	

\*  $V_{DRM}$  or  $V_{RSM}$  can be applied for all types on a continuous dc basis without incurring damage.

*Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.  
Data are subject to change without notice.*