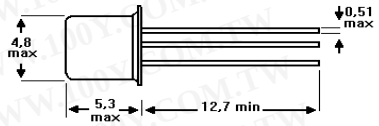
COMSET SEMICONDUCTORS

2N2646
2N2647

SILICON UNIJONCTION 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°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°C unless otherwise noted, R_{GK}=1000Ω

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

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

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