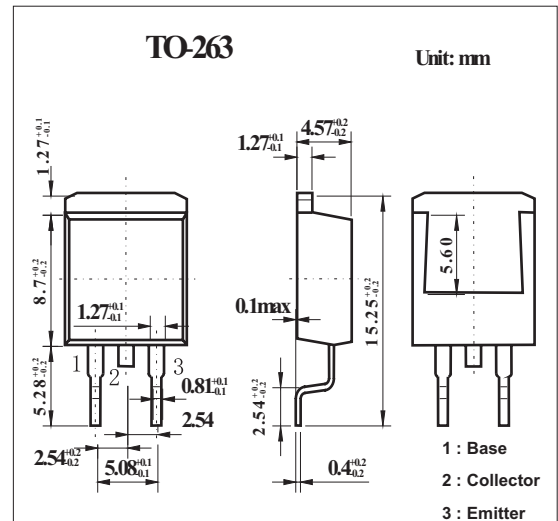


Silicon NPN Triple Diffused Type

2SD2414

■ Features

- Low Saturation Voltage: $V_{CE(sat)}=0.5V(\text{Max.})(\text{at } I_C=4A)$

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	7	A
Base current	I_B	1	A
Collector power dissipation	P_C	1.5	W
		40	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

2SD2414

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector cut-off current	IcBO	V _{CB} = 100 V, I _E = 0			5	μA	
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0			5	mA	
Collector-emitter sustaining voltage	V _{CEO}	I _C = 50 mA, I _B = 0	80			V	
DC current gain	h _{FE}	V _{CE} = 1 V, I _C = 1 A	100		320		
		V _{CE} = 1 V, I _C = 4 A	30				
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 4A, I _B = 0.4A		0.25	0.5	V	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 4A, I _B = 0.4A		0.9	1.4	V	
Transition frequency	f _T	V _{CE} = 4V, I _C = 1A		10		MHz	
Collector output capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz		200		pF	
Storage time Turn-on Time	t _{on}	<p> $I_{B1} = -I_{B2} = 0.3 \text{ A}$, $V_{CC} = 30 \text{ V}$ DUTY CYCLE $\leq 1\%$ </p>		0.4		μs	
Storage time Storage Time	t _{stg}				2.5		
Storage time Fall Time	t _f				0.5		