

EPOXY PACKAGE TRANSISTORS (NPN)

Maximum Ratings						Electrical Characteristics (Ta=25°C, Unless Otherwise Specified)															
Type No.	V _{CBO} (V) Min	V _{CEO} (V) Min	V _{EBO} (V) Min	I _{CBO} (μA) Max	V _{CB} (V) Min	h _{FE} Ⓢ		I _C & V _{CE} (mA) (V)	V _{CE(Sat)} & V _{BE(Sat)} (V) (V)			I _C (mA)	C _{ob} (pF) Max	f _T (MHz) Ⓢ			I _C (mA)	NF (dB) Ⓢ	Freq (MHz)	t _{off} (ns) Max	
						Max	Max		Max	Min	Max		Max		Min	Typ	Max		Max		
CIL631	140	120	5.0	0.10	100	20		1.00 10	0.80			100	12.0			100					
CIL621	100	100	5.0	0.50	80	40	150	1.00 10	1.00		0.70	50	25.0			100					
CIL622	100	100	5.0	0.50	80	100	300	1.00 10	1.00		0.70	50	25.0			100		1			
CIL611	80	80	5.0	0.50	60	40	150	1.00 10	1.00		0.70	50	25.0			100		1			
CIL612	80	80	5.0	0.50	60	100	300	1.00 10	1.00		0.70	50	25.0			100		1			
CIL613	80	80	5.0	0.50	60	250	750	1.00 10	1.00		0.70	50	25.0			100		1			
CIL601	60	60	5.0	0.50	40	40	150	1.00 10	1.00		0.70	50	25.0								
CIL602	60	60	5.0	0.50	40	100	300	1.00 10	1.00		0.70	50	25.0								
CIL603	60	60	5.0	0.50	40	250	750	1.00 10	1.00		0.70	50	25.0								
CIL704	60	60	5.0	0.10	40	40	150	1.00 10	0.25			10	8.0			300					
CIL931	50	50	5.0	0.10	40	80 200		0.10 10 1.00 10	*0.60		*0.75	10	6.0					4			
CIL932	50	50	5.0	0.10	40	150 350		0.10 10 1.00 10	*0.60		*0.75	10	6.0					3			
CIL147	50	45	5.0	0.25	20	110	450	2.00 5					2.5					10		.001	
CIL147A	50	45	5.0	0.05	20	110	220	2.00 5					2.5					10			
CIL147B	50	45	5.0	0.05	20	200	450	2.00 5					2.5					10		.001	
CIL531	40	40	5.0	0.50	30	40	150	1.00 10	*1.00		*0.70	50	25.0			100					
CIL532	40	40	5.0	0.50	30	100	300	1.00 10	*1.00		*0.70	50	25.0								
CIL533	40	40	5.0	0.50	30	250	750	1.00 10	*1.00		*0.70	50	25.0								
CIL521	32	32	5.0	0.50	20	40	150	1.00 10	*1.00		*0.70	50	25.0			100					
CIL522	32	32	5.0	0.50	20	100	300	1.00 10	*1.00		*0.70	50	25.0			100					
CIL523	32	32	5.0	0.50	20	250	750	1.00 10	*1.00		*0.70	50	25.0			100					
CIL701	32	32	7.0	0.10	25	40	150	1.00 10	0.40			25	15.0								
CIL702	32	32	5.0	0.10	25	100	300	1.00 10	0.25			10	8.0			300					
CIL703	32	32	5.0	0.10	25	250	750	1.00 10	0.25			10	8.0			300					
CIL911	32	32	5.0	0.10	20	40	150	0.10 10	0.60			100	5.0					4			
CIL912	32	32	5.0	0.10	20	100	300	0.10 10	0.60			100	5.0					3			
2N4140	60	30	5.0			20 20 40 35 25 20		500.0 10 150.0 1 150.0 10 10.00 10 1.00 10 0.10 10	0.40 1.60		1.30 2.60	150 500	8.0			250		20			310

*NOTE: V_{CE(SAT)} AND V_{BE(SAT)} VALUES ARE TYPICAL.

2383394 0000251 481

TO-106

EPOXY PACKAGE TRANSISTORS (NPN)

Maximum Ratings						Electrical Characteristics (Ta=25°C, Unless Otherwise Specified)															
Type No.	V _{CB0} (V) Min	V _{CEO} (V) Min	V _{EBO} (V) Min	I _{CB0} Ⓢ (μA) Max	V _{CB} (V) Min	h _{FE} Ⓢ		I _C & V _{CE} (mA) (V)	V _{CE} (Sat) & V _{BE} (Sat) Ⓢ I _C (V) (V) (mA)				C _{ob} (pF) Max	f _T Ⓢ I _C (MHz) (mA)			NF Ⓢ Freq (dB) (MHz)	t _{off} (ns) Max			
2N4141	60	30	5.0			30		500.0	10	0.40		1.30	150	8.0	250		20		310		
						50		150.0	1	1.60		2.60	500								
						100	300	150.0	10												
						75		10.00	10												
						50		1.00	10												
						35		0.10	10												
2N3565	30	25	6.0	0.10	25	150	600	1.00	10	0.35			1		240						
CIL840	25	25	4.0	0.01	20	100		0.01	5	0.70			10								
						175		0.10	5												
						250		1.00	5												
CIL148	30	20	5.0	0.05	20	110	800	2.00	5					2.5			10	.001			
CIL148A	30	20	5.0	0.05	20	110	220	2.00	5					2.5			10	.001			
CIL148B	30	20	5.0	0.05	20	200	450	2.00	5					2.5			10	.001			
CIL148C	30	20	5.0	0.05	20	420	800	2.00	5					2.5			10	.001			
CIL149	30	20	5.0	0.05	20	200	800	2.00	5					2.5			4	.001			
CIL149B	30	20	5.0	0.05	20	200	450	2.00	5					2.5			4	.001			
CIL149C	30	20	5.0	0.05	20	420	800	2.00	5					2.5			4	.001			
CIL194A	30	20	4.0	0.05	20	200	500	1.00	10					1.5	200		1				
CIL511	20	20	5.0	0.50	15	40	150	1.00	10	*1.00		*0.70	50	25.0	100						
CIL512	20	20	5.0	0.50	15	100	300	1.00	10	*1.00		*0.70	50	25.0	100						
CIL513	20	20	5.0	0.50	15	250	1000	1.00	10	*1.00		*0.70	50	25.0	100						
2N4275	40	15	4.5			18		100.0	1	0.20	0.7	0.85	10	4.0	400		10		12		
						30		30.00		0.25		1.15	30								
						35	120	10.00	1	0.50		1.60	100								
										0.18	0.7	1.00	10								
CIL768	40	15	5.0	0.40	20	20	60	10.00	1	0.25			10	3.0		600					
CIL769	40	15	4.5	0.40	20	40	120	10.00	1	0.25	0.7	0.85	10	4.0		500	10		18		
2N4274	40	12	4.5			18		100.0	1	0.20	0.7	0.85	10	4.0	400		10		12		
						30		30.00		0.25		1.15	30								
						35	120	10.00	1	0.50		1.60	100								
										0.18	0.7	1.00	10								
CIL476	12	12	4.0	0.10	10	20	60	1.00	10					2.0	30						
CIL731	12	12	4.0	0.40	10	20	100	10.00	1	0.25			10	4.0		300					
CIL732	12	12	4.0	0.40	10	40	120	10.00	1	0.25			10	4.0		300					

*NOTE: TYPICAL VALUES

2383394 0000252 318