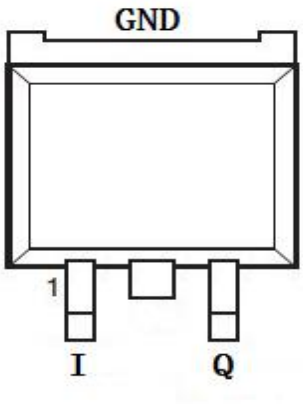


2

1

I	1	
GND	2	
Q	3	10kHz $C_Q \geq 10uF$ ESR $\leq 10\Omega$

I ..... -0.3V~42V

Q ..... -0.3V~12V

V_I-V_Q ..... -0.3V~37V

[2]

θ_{JA} ..... 37 /W

..... -40 ~150

10s 260

..... -40 ~150

ESD[3]

V_{ESD_HBM} .....-2000V~+2000V

V_{ESD_CDM} .....-300V~+300V

..... $V_Q + V_{dr}$~42V

..... -40 ~125

V_I = 13.5V I_Q = 10mA T_A = 25

	V_I	I_Q = 0mA V_Q=5V	5.3		42	V
	V_Q	10mA ≤ I_Q ≤ 400mA 6.4V ≤ V_I ≤ 16V	4.9	5.0	5.1	V
		10mA ≤ I_Q ≤ 400mA 16V ≤ V_I ≤ 42V		5.0		V
	ΔV_{LNR}	6.4V ≤ V_I ≤ 42V		10	20	mV
	ΔV_{LDR}	10mA ≤ I_Q ≤ 400mA		10	30	mV
	V_{dr}	I_Q = 300mA	0.15	0.25	0.35	V
	I_{q1}	V_I = 12V		90	110	μA
	I_{q2}	V_I = 13.5V I_Q = 10mA		90	110	μA
	I_Q	V_I = 7V V_Q = 5V	0		1	A
	I_{LIM}	V_I = 13.5V V_Q = 0.9*$V_{Q(normal)}$	0.8	1.0	1.2	A
RMS	e_n	$V_{Q\ ppm}$ T_j = 25 10Hz ≤ f ≤ 10kHz		30		ppm
	PSRR	f = 120Hz V_{ripple} = 0.5V_{pp}		65		dB
	V_{UVLO}	V_I	2.5	2.7	2.9	V
	V_{UVLO_HYS}			0.2		V

[1]

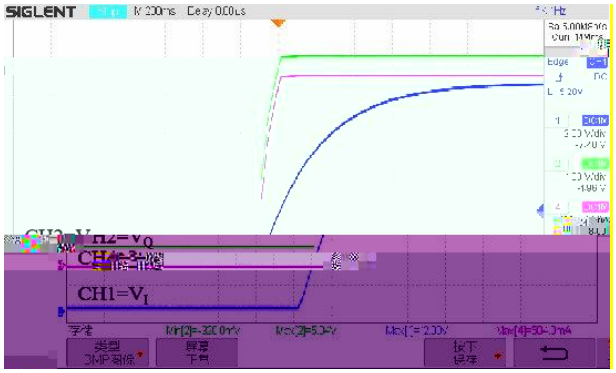
[2]θ_{JA} PCB T_A = 25

[3]ESD-HBM ANSI/ESDA/JEDEC JS-001 ESD-CDM EIA-JEDEC JESD22-C101

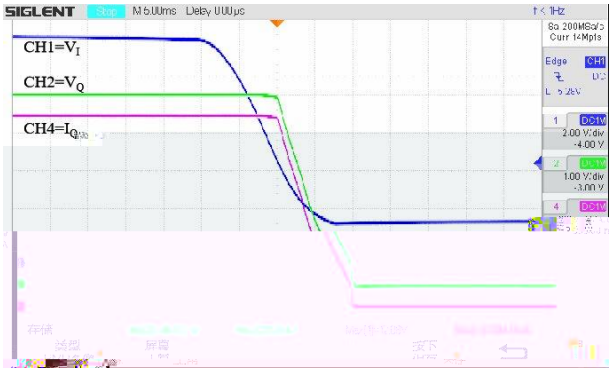
[4]

T_A=25

V_I=12V V_Q=5V I_Q=504mA

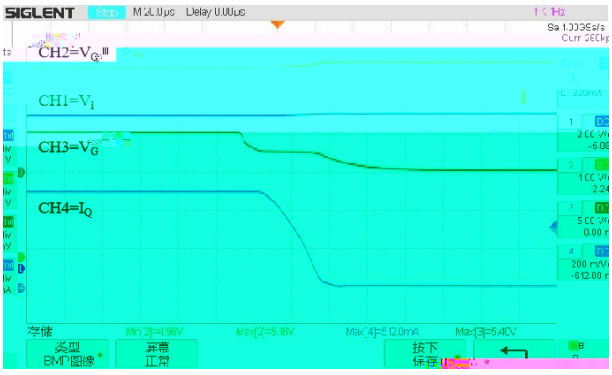


V_I=12V V_Q=5V I_Q=504mA



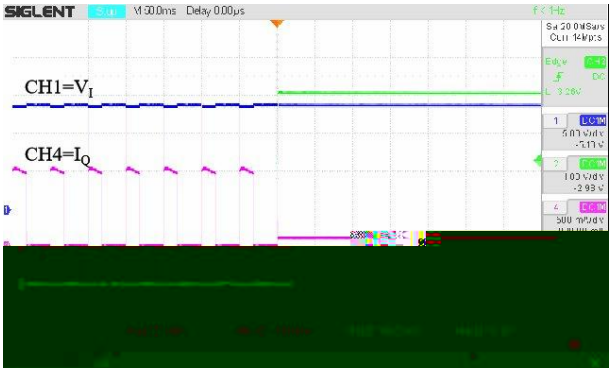
V_I=8V V_Q=5V I_Q 0mA~500mA

V_I=8V V_Q=5V I_Q 500mA~0mA

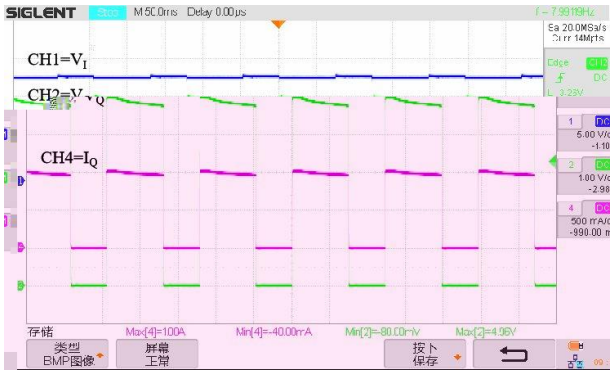


V_I=13.5V V_Q=5V I_Q 0.1mA~

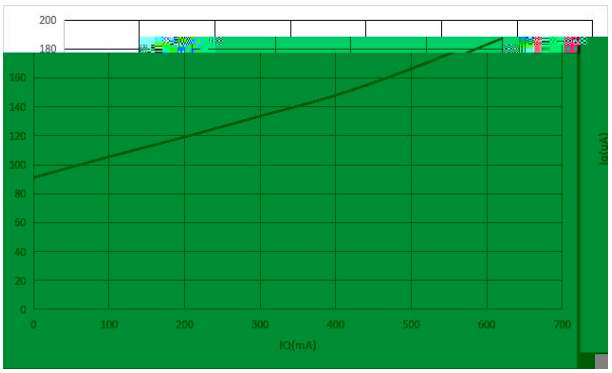
V_I=13.5V V_Q=5V I_Q ~0.1mA



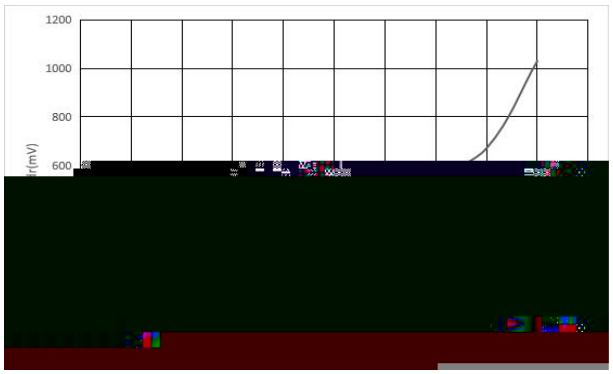
V_I=13.5V V_Q=5V I_Q=1A



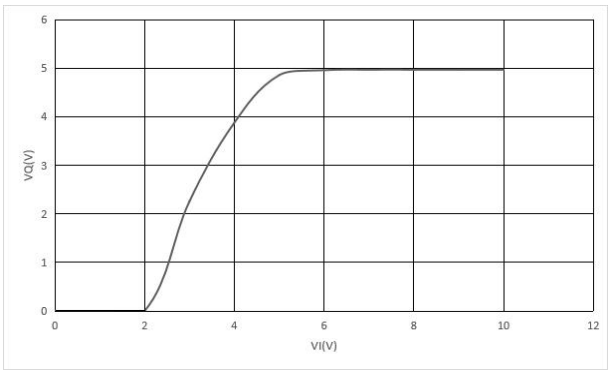
V_I=13.5V



V_I=13.5V V_Q=4.99V



R_{load}=25Ω



100nF~470nF

10uF~470uF

10uF

1~2Ω

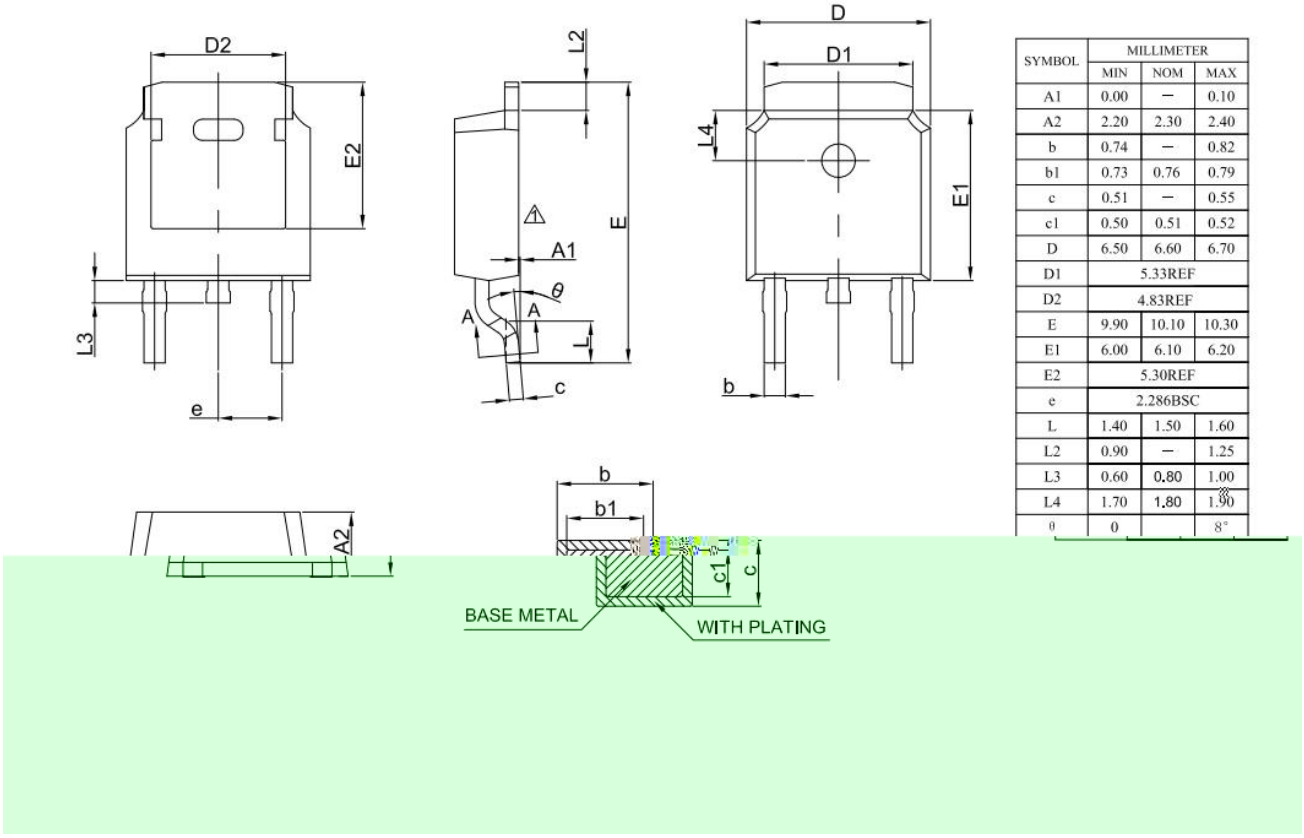
IC IC

L4080 1A

$P_D = (V_{IN}-V_{OUT}) \times I_{OUT}+V_{IN} \times I_{GND}$

$P_{D(MAX)} = (T_{J(MAX)}-T_A)/\theta_{JA}$

$T_{J(MAX)}$ T_A



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A1	0.00	—	0.10
A2	2.20	2.30	2.40
b	0.74	—	0.82
b1	0.73	0.76	0.79
c	0.51	—	0.55
c1	0.50	0.51	0.52
D	6.50	6.60	6.70
D1	5.33REF		
D2	4.83REF		
E	9.90	10.10	10.30
E1	6.00	6.10	6.20
E2	5.30REF		
e	2.286BSC		
L	1.40	1.50	1.60
L2	0.90	—	1.25
L3	0.60	0.80	1.00
L4	1.70	1.80	1.90
θ	0		8°

TO252-3

L4080	TO252-3	2500/Tape & Reel