

isc Three Terminal Positive Voltage Regulator

KA7805E

FEATURES

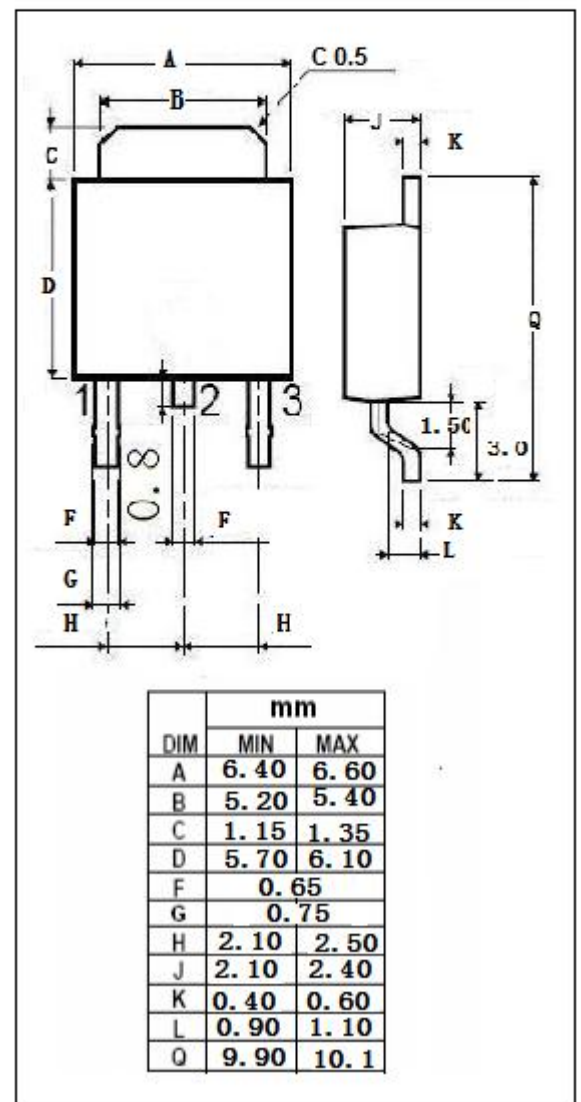
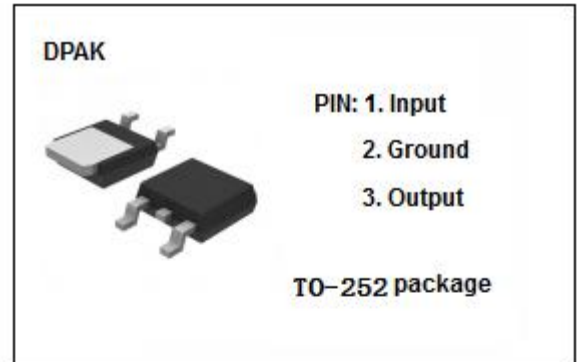
- Output current in excess of 1.0A
- Output voltage of 5V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	RATING	UNIT
V _i	DC input voltage	35	V
I _o	Output current	internally limited	
P _{tot}	Power dissipation	internally limited	
T _{OP}	Operating junction temperature	-40~125	°C
T _{stg}	Storage temperature	-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	5	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	65	°C/W



isc Three Terminal Positive Voltage Regulator**KA7805E****• ELECTRICAL CHARACTERISTICS** $T_j=25^{\circ}\text{C}$ ($V_i=10\text{V}$, $I_o=0.5\text{A}$, $C_i=0.33\ \mu\text{F}$, $C_o=0.1\ \mu\text{F}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_o	Output Voltage	$V_{in}=10\text{V}$; $I_o=500\text{mA}$	4.8	5.2	V
V_o	Output Voltage	$7\text{V}\leq V_{in}\leq 20\text{V}$; $P_o\leq 15\text{W}$ $5.0\text{mA}\leq I_o\leq 1.0\text{A}$	4.75	5.25	V
ΔV_v	Line Regulation	$7\text{V}\leq V_{in}\leq 25\text{V}$ $8\text{V}\leq V_{in}\leq 12\text{V}$		100 50	mV
ΔV_i	Load Regulation	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$ $250\text{mA}\leq I_o\leq 750\text{mA}$		100 50	mV
I_b	Quiescent Current			8.0	mA
Δ_{b1}	Quiescent Current Change	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$; $V_{in}=10\text{V}$		0.5	mA
Δ_{b2}	Quiescent Current Change	$7\text{V}\leq V_{in}\leq 25\text{V}$; $I_o=500\text{mA}$		1.3	mA

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